

## DOCUMENT RESUME

ED 181 778

HE 012 138

AUTHOR Harclerod, Fred F., Ed.  
TITLE Financing Postsecondary Education in the 1980's.  
INSTITUTION Arizona Univ., Tucson. Center for the Study of Higher Education.  
SPONS AGENCY Education Commission of the States, Denver, Colo.  
Inservice Education Program.; National Association of Coll. and Univ. Business Officers, Washington, D.C.  
PUB DATE Aug 79  
NOTE 126p.  
AVAILABLE FROM Center for the Study of Higher Education, University of Arizona, 1415 North Fremont Ave., Tucson, AZ 85719 (\$4.00)  
EDRS PRICE MF01/PC06 Plus Postage.  
DESCRIPTORS Accountability; Budgeting; \*College Administration; College Planning; Conference Reports; \*Educational Finance; Enrollment Projections; Federal Aid; Financial Support; Futures (of Society); \*Government Role; \*Higher Education; State Aid; Statewide Planning; \*Student Financial Aid; Tax Support; Trend Analysis; Tuition

## ABSTRACT

Proceedings of a conference on financing postsecondary education in the 1980s, sponsored by the Center for the Study of Higher Education of the University of Arizona in close collaboration with the Education Commission of the States and the National Association of College and University Business Officers, are presented. Contents are as follows: "Financing in the '80s: An Introduction," by Fred F. Harclerod; "Financial Prospects for Higher Education in the '80s," by Larry L. Leslie; "Unused Capacity: Opportunity or Disaster?" by Howard R. Bowen; "The State Budget Process: Roles and Responsibilities," by Lyman A. Glenny; "Budgeting Approaches in the 1980s: Looking for Mr. Goodbar," by Anthony W. Morgan; "Financial Management from a State Perspective," by Robert A. Huff; "Problems of Variability in Financing Postsecondary Education in the 1980s," by John B. Lee; "Tuition and Student Financial Aid Policies and Mechanisms for Distributing Federal Student Financial Aid," by William B. Hyde, Jr.; "Financial Accountability," by Richard M. Millard; "Fiscal Accountability: A Reaction," by Gary M. Munsinger; "'Costing' in the Planning/Budgeting Process in Higher Education," by Allan W. Barber; and "Financing Postsecondary Education in the '80s: A Governor's Perspective," by Robert F. Bennett. (SW)

\*\*\*\*\*  
\* Reproductions supplied by EDRS are the best that can be made \*  
\* from the original document. \*  
\*\*\*\*\*

U.S. DEPARTMENT OF HEALTH,  
EDUCATION & WELFARE  
NATIONAL INSTITUTE OF  
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY.

# FINANCING POSTSECONDARY EDUCATION IN THE 1980'S

"PERMISSION TO REPRODUCE THIS  
MATERIAL HAS BEEN GRANTED BY

*David J. Allen*  
*Allen*

TO THE EDUCATIONAL RESOURCES  
INFORMATION CENTER (ERIC)."



ED181778

Fred L. Harclerodd (Editor)

Allan W. Barber  
Robert F. Bennett  
Howard R. Bowen  
Lyman A. Glenny  
Robert A. Huff  
William B. Hyde, Jr.  
John B. Lee  
Larry F. Leslie  
Richard M. Millard  
Anthony W. Morgan  
Gary M. Munsinger

CENTER FOR THE STUDY OF HIGHER EDUCATION  
College of Education, University of Arizona

With significant support by

The Inservice Education Project  
of the  
Education Commission of the States

and

The National Association of  
College and University  
Business Officers

HE 012138

THE CENTER FOR THE STUDY OF HIGHER EDUCATION  
COLLEGE OF EDUCATION  
UNIVERSITY OF ARIZONA

The higher education program at the University of Arizona was established first in the early 1960's and reorganized in 1974 to expand as an area of scholarly inquiry, research, instruction, and public service. It was designated as The Center for the Study of Higher Education in 1977. The Center conducts studies, projects, conferences, and forums and makes the results available to other institutions and persons with mutual concerns. Graduate degree programs are designed to prepare two types of administrators: generalists who coordinate policy development and decision making and specialists who facilitate the flow of technical information and provide expertise in a special area. Research programs are conducted in critical areas of public policy concern whether it be state or regional, national, or international in scope. Similarly, public service projects are conducted in major fields of policy study and development. The long-run goals of the Center for the Study of Higher Education are to contribute to the continuing change and improvement in the administration of higher education through the education of its graduates and the improvement of public policy through its research studies and public service projects.

The Center's publications are designed to be relevant to the needs of the University, to the State of Arizona, and to colleges and universities throughout the country. They can be obtained on a limited basis by institutions and associations which are able to exchange publications of a comparable type. Others may obtain copies for \$4.00, which includes postage, handling, and printing costs. Inquiries should be addressed to the Chairman, Center for the Study of Higher Education, University of Arizona, 1415 North Fremont Avenue, Tucson, Arizona 85719.

Report Series, No. 6

Equal Opportunity/Affirmative Action Employer

**FINANCING POSTSECONDARY EDUCATION  
IN THE 1980's**

**Fred F. Harclerod (Editor)**

**Allan W. Barber  
Robert F. Bennett  
Howard R. Bowen  
Lyman A. Glenny  
Robert A. Huff  
William B. Hyde, Jr.  
John B. Lee  
Larry L. Leslie  
Richard M. Millard  
Anthony W. Morgan  
Gary M. Munsinger**

**Center for the Study of Higher Education  
College of Education  
University of Arizona  
Tucson, Arizona 85721**

**August, 1979**



## TABLE OF CONTENTS

|                                                                                                                         | Page |
|-------------------------------------------------------------------------------------------------------------------------|------|
| Contributors .....                                                                                                      | i    |
| Preface .....                                                                                                           | iii  |
| I. Financing in the '80s: An Introduction .....                                                                         | 1    |
| Fred F. Harclerod                                                                                                       |      |
| II. Financial Prospects for Higher Education in the '80s .....                                                          | 5    |
| Larry L. Leslie                                                                                                         |      |
| III. Unused Capacity: Opportunity or Disaster? .....                                                                    | 23   |
| Howard R. Bowen                                                                                                         |      |
| IV. The State Budget Process: Roles and Responsibilities .....                                                          | 35   |
| Lyman A. Glenny                                                                                                         |      |
| V. Budgeting Approaches in the 1980s: Looking for Mr. Goodbar .....                                                     | 47   |
| Anthony W. Morgan                                                                                                       |      |
| VI. Financial Management from a State Perspective .....                                                                 | 67   |
| Robert A. Huff                                                                                                          |      |
| VII. Problems of Variability in Financing Postsecondary<br>Education in the 1980s .....                                 | 73   |
| John B. Lee                                                                                                             |      |
| VIII. Tuition and Student Financial Aid Policies and Mechanisms for<br>Distributing Federal Student Financial Aid ..... | 81   |
| William B. Hyde, Jr.                                                                                                    |      |
| IX. Financial Accountability .....                                                                                      | 87   |
| Richard M. Millard                                                                                                      |      |
| X. Fiscal Accountability: A Reaction .....                                                                              | 95   |
| Gary M. Munsinger                                                                                                       |      |
| XI. "Costing" in the Planning/Budgeting Process in Higher Education .....                                               | 97   |
| Allan W. Barber                                                                                                         |      |
| XII. Financing Postsecondary Education in the '80s:<br>A Governor's Perspective .....                                   | 123  |
| Robert F. Bennett                                                                                                       |      |

## CONTRIBUTORS

Allan W. Barber, Vice President for Business and Finance, University of Georgia since 1973; Treasurer, University of Georgia (1967-1971).

Robert F. Bennett, Governor of the State of Kansas.

Howard R. Bowen, R. Stanton Avery Professor of Economics and Education, Claremont Graduate College since 1974; formerly President of Grinnell College and the University of Iowa, and Chancellor of Claremont University Center.

Lyman A. Glenny, Professor of Education since 1968; formerly Director of the Center for Research and Development in Higher Education, University of California, Berkeley (1972-1976); and Executive Director of the Illinois State Board of Higher Education (1965-1968).

Fred F. Harclerod, Professor of Higher Education and Director, Center for the Study of Higher Education, University of Arizona since 1974; formerly President of the American College Testing Program (1967-1974) and the California State University at Hayward (1959-1967).

Robert A. Huff, Executive Coordinator, Arizona Board of Regents since 1979; formerly Executive Secretary, Board of Educational Finance, State of New Mexico (1975-1979); Professor of Higher Education, Virginia Polytechnic University (1974-1975); Associate Director of the National Center for Higher Education Management Systems (1969-1974).

William B. Hyde, Jr., Postsecondary Finance Economist, Education Finance Center, Education Commission of the States since 1977; Executive Secretary, National Academy of Education, Stanford, Ca. (1975-1977).

John B. Lee, Project Director, Senior Policy Analyst, Education Commission of the States since 1975; Policy Analyst, Stanford Research Institute (1974-1976).

Larry L. Leslie, Professor of Higher Education, University of Arizona since 1977; Chairman and Professor of Higher Education, Pennsylvania State University (1970-1977).

Richard M. Millard, Director, Department of Postsecondary Education, Education Commission of the States since 1969; formerly Chancellor, Board of Higher Education, Commonwealth of Massachusetts (1967-1969).

Anthony W. Morgan, Assistant to the Executive Vice President, University of Utah since 1975.

Gary M. Munsinger, Vice President for Planning and Budgeting, University of Arizona since 1975; Assistant Executive Vice President, University of Arizona (1972-1975); Professor of Marketing, University of Arizona.

## PREFACE

Clearly, the financing of Higher Education in the 1980's is a major problem and quite different from problems of the 1960's or the 1970's. Accordingly, the Center for the Study of Higher Education, in close collaboration with the Inservice Education Project of the Education Commission of the States and the National Association of College and University Business Officers, conducted a nationwide conference dealing with the topic in the 1978-79 academic year. The papers and discussions at this conference make up most of the contents of this volume.

The Inservice Education Project of the Education Commission of the States was originally funded by the W.K. Kellogg Foundation and assisted significantly in support of the Conference and this monograph. The Ford Foundation likewise made an important grant to the National Association of College and University Business Officers for a study in the area of finance, and NACUBO assisted in publishing these proceedings through this Ford Foundation grant. One of the objectives of that grant is to identify the financial issues facing higher education in the '80s and to then develop the cost behavior analysis tools institutional officers will need to cope with the issues. Rather than develop a separate paper, NACUBO felt that the Conference, which brought together broad-ranging, divergent views, offered an excellent opportunity to provide readers with a wealth of information, ideas, and opinions that need to be absorbed and evaluated. In addition, some of the papers provide useful materials which will help in the development of the cost behavior analysis tools.

Of course, the materials presented in these various papers are the responsibility of the individual authors and do not represent the opinion of officials of either of the supporting foundations or the two associations. Likewise, they do not represent opinions of officials of the University of Arizona or its Center for the Study of Higher Education. However, these scholarly and provocative papers do provide a number of critical points of view related to financing higher education in the 1980's and serve as an excellent resource for those persons who will have to face the day-to-day and year-to-year financing problems of the coming decade.

## CHAPTER I

### FINANCING IN THE '80s: AN INTRODUCTION

*Fred F. Harclerod*

Financing of higher education institutions in the United States always has been a significant part of the budget of the individual states. The General Court (the corporate governing body) of the Massachusetts Bay Colony provided the first such financing almost three hundred and fifty years ago, on October 28, 1636, when it "passed the legislative act that founded Harvard College." The Court appropriated 400 pounds to build the college, an amount which was more than half of the entire tax levy for the preceding year and almost one quarter of the levy for 1636.<sup>1</sup> Although there have been significant fluctuations in the intervening centuries, appropriations of this order by the fifty states continue to this day. In addition, the federal government has gone beyond limited land grant activity. During the past three decades it has greatly expanded its purchase of services from higher education and in the past decade increased its yearly tax support significantly, particularly through financial aid to students.

However, the recent trend toward major increases in support is changing. The decade of the 1980's for higher education undoubtedly will be a time of considerable turmoil and ferment. The people of the United States appear still, on an individual basis, to want higher education available for themselves or their family members. Nevertheless, as taxpayers they currently are highly resistant to tax increases or even to continuing existing tax rates. All tax-supported government institutions will be affected seriously and more efficient and effective use of funds will be a constant demand. Since higher education is one of the largest consumers of tax money in almost every state, the effects of tax resistance would be particularly traumatic.

For most of the past three decades the need (demand) for the services of higher education has been greater than the available supply. As a result the percentage of the gross national product devoted to providing these services increased from approximately one percent to almost three percent, a major change in social direction. It was "heady stuff" for teachers and administrators in all types of colleges and universities. In a few years they moved from lives of

---

<sup>1</sup>Morison, Samuel E., *The Founding of Harvard College*, Harvard University Press, Cambridge, Mass., 1935, pp. 168-169.

"genteel poverty" to positions with many of the highest salaries paid by tax funds. Teaching loads were cut materially in order to attract or keep enough teachers, promotions were rapid and fringe benefits began to approach those available in major industries. Those persons newly entered into these attractive positions took the recently acquired perquisites for granted.

Now, the demand for higher education is lower and decreasing. Other, newer social demands such as those for improved health care, self-sufficiency in energy, and a pollution-free environment have very high priorities and are very costly. The competition for tax dollars, thus, becomes fierce and in many states the percentage of state tax funds going into higher education has already decreased substantially.

As a consequence, financing higher education in the 1980's is of major concern. Divergent estimates regarding the need (demand) for higher education in the next decade makes funding decisions difficult. The use of data on a national base poses perplexing problems and disaggregation of data by region, state and type of institution will be absolutely essential. Various approaches will be needed for estimation of need, the costing of varying services, and budgeting and financial review.

The study of finances of higher education, when considered at a basic fundamental level, includes only the actual funds available from four sources: (1) fees of all types which are collected from students, (2) funds appropriated by governments for institutional expenditure, (3) grants from donors, and (4) income from investments, sales or contracts for services. At a second, broader level those who study the field of higher education sometimes equate "financing" with resource use, including examination of all assets, including available physical plant and human talent. At a third, even more expanded level, scholarly study of "financing of higher education" includes analysis of the entire social and economic scene, the varying vectors which will affect the potential for securing future resources and varying methods for making efficient and effective use of all resources which are or will be available.

Most of the chapters which follow were first presented at a conference convened by the Center for the Study of Higher Education of the University of Arizona in late 1978. Co-sponsored by the In-Service Education Project of the Education Commission of the States and the National Association of College and University Business officers, it brought together several of the major scholars studying these problems. In the papers the approach is usually at the third most comprehensive level, even though some address specific areas such as budgeting or costing, or specific problems such as student financial aid or institutional variability.

Some repetition in the various chapters underlines recurrent persisting themes, such as the need for more attention to organized legislative activity and



more thorough planning activity. Some major differences in points of view in the papers clearly emphasize the potential difficulties, such as the fact that manpower planning data can be reversed in a two- three-year period, or that no one really knows how college-going plans of male high school graduates may change from year to year. However, these varied essays and scholarly papers clearly present the issues and provide some very useful suggestions of ways to attack those difficult questions in a beneficial and productive way.

## CHAPTER II

### THE FINANCIAL PROSPECTS FOR HIGHER EDUCATION IN THE '80s

Larry L. Leslie

In analyzing the future of higher education finance, the temptation to accept ready-made conclusions is great. Much has been said of expected future anticipated enrollment declines, and many conclude that financial resources will decline in a roughly proportional manner. Recent activities in many states both prior to and subsequent to passage of the Jarvis-Gann initiative (Proposition 13) in California give this view additional impetus.

Whether these prophecies are correct, of course, no one can say with certainty. However, there exists conceptual and empirical evidence capable of elevating the discussion beyond conventional wisdom or reliance upon a single predictor variable, such as anticipated enrollment levels. This paper presents an assessment of these concepts and evidence, and an informed though admittedly qualitative appraisal of the financial prospects for higher education in the 1980's.

#### BASES FOR ANTICIPATING THE FUTURE

Although major current interest on this topic would appear to be in the *total* future resources available for higher education, institutional operating funds come from several sources. Most important for public institutions is government, which contributes approximately 64.9 percent of all resources (see Table 1).<sup>1</sup> For nonpublic institutions, only 21.2 percent of funds come from government, whereas 36.7 percent come from student tuition and fees—a category that accounts for only 13.4 percent of public institution incomes.<sup>2</sup> In both

<sup>1</sup>The most recent year for which comprehensive data are available is academic year 1976-77 (USDHEW, NCES, *Projections of Education Statistics to 1979-80*, and *Projections of Education Statistics to 1986-87*, forthcoming).

<sup>2</sup>Care must be taken in defining terms. If total "costs" of higher education are considered, students and their families pay roughly 50 percent (Elchanan Cohn, "The Costs of Formal Education in the United States, 1950-1975," *Journal of Education Finance*, 3 (Summer 1977): 70-81); if expenditures for higher education are considered, yet another cost distribution obtains. In this paper, focus is on the portion of annual institutional operating budgets coming from the various income sources.

institutional types, sales and services account for additional large shares, being 16.5 percent in public institutions and 23.4 percent in private institutions, respectively. Major revenue sources in this category are auxiliary enterprises such as dormitories, food services, and hospitals. For nonpublic institutions, important funds (14.8%) come from private gifts, grants, and contracts, plus endowment income; for public institutions the category composes only 2.6 percent. "Other" funds compose 2.6 percent and 3.9 percent in public and nonpublic institutions, respectively (see Table 1). Consequently, not one but several conceptual understandings are necessary to anticipate the aggregate or total level of funds that will be available at a future time.

### Government Sources

Government is a major income source, especially for the public sector, and this category is a logical starting place. Although many factors contribute to the financial behaviors of governments in the United States, clearly the most appropriate and broad conceptual base for explaining these behaviors is political in nature. As Wildavsky puts it, "Perhaps the 'study of budgeting' is just another expression for the 'study of politics.'"<sup>3</sup> Other bases, such as those which are economic, social, and cultural, are important, too. However, politics is the all-encompassing framework and the one that normally will take precedence when conflicts in government appropriating and legislating processes occur. At the most fundamental level this means that ultimately the priority must lie with those considerations that will allow individuals to obtain and maintain political office.<sup>4</sup> This is as it should be in a democratic society, and this is why the political base is most appropriate for understanding past and future government behaviors in relation to higher education financing.

1. *Conceptual Evidence.* Fiscal behavior of political figures is lucidly and insightfully described in Wildavsky's *The Politics of the Budgetary Process* (1974). In this volume, Wildavsky reports on his empirical examination of the federal budgetary process. In so doing he identifies several important concepts fundamental to understanding the financial future of higher education. Perhaps foremost of these is the concept of budgetary incrementalism:

The largest determining factor of the size and content of this year's budget is last year's budget . . . Many items in the budget are standard and are simply reenacted every year unless there is a special reason to challenge them.<sup>5</sup>

<sup>3</sup> Aaron Wildavsky, *The Politics of the Budgetary Process*, 2nd edition (Boston: Little, Brown and Company, 1974), p. 126.

<sup>4</sup> This is not to argue that on individual decisions political figures must always reflect the will of their constituents. Rather it is the sum total of their political behavior for which we hold politicians accountable, recognizing of course that there are "imperfections" in the American political system.

<sup>5</sup> Wildavsky, *The Politics*, p. 13.

The implication is that much government spending is institutionalized; additions or deletions occur but they are only marginally significant and they are usually small. Of 444 federal budgetary cases considered by Wildavsky, the largest number of annual increments (149) fit into the smallest category—changes of from zero to five percent—and the vast majority are less than 30 percent.

Another concept is that budgets satisfy.<sup>6</sup> They do not attempt the ideal; they are directed along paths of least resistance. "If too many people object, it is a bad idea," seems to be a good operating principle in the appropriations process.

Thus, budgets and appropriations possess a kind of *political inertia*. Though difficult to obtain, new funding, once started, is difficult to arrest or impede. In part, this is because numerous and often politically powerful groups have a vested interest in maintaining essentially any public program; and to threaten discontinuance or reduction is usually to arouse strong resistance, a most unpalatable proposition to any political office holder.

Each appropriation may be conceived of as a political equilibrium representing the final product of numerous compromises, concessions, and trade-offs among a wide range of interest groups both internal and external to the legislative body. Upset this equilibrium by cutting an appropriation and a delicate balance may be lost with the result that entire agreements may begin to unravel—agreements that may represent years if not decades of legislative action and reaction.

This conception of the budget is reinforced by Wildavsky's principle of "fair share":

"Fair share" means not only the base an agency has established but also the expectation that it will receive some proportion of funds, if any, which are to be increased over or decreased below the base of the various governmental agencies. "Fair share," then, reflects a convergence of expectations on roughly how much the agency is to receive in comparison to others.<sup>7</sup>

The implication is that equity considerations dictate that each agency or function is entitled to a certain portion, more or less, of the budget and of budget increases. Again incrementalism and inertia are illustrated.

This discussion would seem to argue for the "firmness," in relative terms, of government funding of higher education although careful reading suggests *caveats* and possible exceptions to the rule. Overall, it would seem conceptually

---

<sup>6</sup> Wildavsky, p. 12.

<sup>7</sup> Wildavsky, p. 17.

that powerful forces act to maintain the general size of agency or function appropriations and that actions to reduce amounts or shares must be extraordinarily powerful to alter directions and general magnitudes. The principle is that political inertia acts to maintain a general level of support for public activities, including higher education, and that unless this strong inertia is somehow offset, past patterns of support will, in general, preordain future patterns.

2. *Empirical Evidence.* Empirical support for the more general proposition that government, as a whole, is always expanding is rooted in Wagner's "Law of Increasing State Activity." Wagner's Law effectively argues that due to the demand for social progress public expenditures grow at a rate faster than the rate of growth of the economy.<sup>8</sup>

More recent and direct evidence of Wagner's Law is illustrated by work completed by Mosher and Poland.<sup>9</sup> The major conclusion made by the authors upon viewing growth in gross U.S. expenditure between 1902 and 1962 was that the growth had been enormous in absolute terms. Government expenditures had grown from 7.7 of the Gross National Product (GNP) in 1902, to 11.6 percent in 1927, to 21.3 percent in 1932, and to 31.7 percent in 1962. A later source puts the figure at 35 percent for 1975.<sup>10</sup> Mosher and Poland observe further that government spending grows faster than the economy almost exclusively during periods of crisis, for example, during war and depression.<sup>11</sup> After the crisis passes the increase is consolidated at a higher public expenditure level and the "public economy" then resumes its growth at about the same rate as the private economy. Such seems to be the pattern of government spending as a whole.

Aggregate spending, of course, says nothing necessarily about spending for a specific function. For this, disaggregations are needed. During crises of war, say Mosher and Poland, domestic spending declines, often substantially; and during domestic crises, the reverse is true.<sup>12</sup> Thus, though total government spending may be expected to grow constantly, steady growth in all areas is not assured although it appears that only a major crisis impeded the trend. Further, in more recent years, war has not meant a decline in domestic spending: witness the Vietnam war era.

At the next level of disaggregation, Mosher and Poland report that per capita spending on education rose in constant dollars from \$13 to \$48 between 1902

<sup>8</sup> Adolph Wagner, *Grundlegung der Politischen Oekonomie*, 3rd ed. (Leipzig: C.F. Winter'sche Verlagshandlung, 1893), p. 893.

<sup>9</sup> Frederick C. Mosher and Orville F. Poland, *The Costs of American Governments: Facts, Trends, Myths* (New York: Dodd, Mead & Company, 1964).

<sup>10</sup> Arthur D. Lynn, Jr., "Taxes, the Price of Civilization," *Arizona Daily Star* (September 10, 1978), F.4.

<sup>11</sup> Mosher and Poland, p. 26.

<sup>12</sup> Mosher and Poland, p. 26.

and 1932, and in the next 30 years, to \$117. As a portion of GNP, education grew from 1.2 percent in 1902 to 4.1 percent in 1962.<sup>13</sup> In 1975, the figure was 7.7 percent. Only during World War II did a decline occur. The "robustness" of education's ability to obtain additional resources year after year truly has been impressive.

Wagner's Law, however, recognizes that constraining factors are in operation too, and presumably the question for the future is whether the constraints on or the generators of Wagner's Law will overpower the other. Among the known constraints are tax opposition, increased government efficiencies, and philosophical disagreement to government expansion among the body politic. The national phenomena generated out of the 1978 Jarvis-Gann initiative in California serve as poignant illustrations of at least the first, if not the third constraint.

So where does this analysis lead? As one reads and reflects upon the work of Wildavsky, Mosher and Poland, and others, one gains a feeling of the awesome power of political inertia and Wagner's Law and the relative impotency of potential restraining forces. Of the forces that might have turned the ever-rising tide of government expenditures for domestic purposes and specifically for education, only World War II succeeded in doing so and the effect lasted only until War's end. On the other hand, government expenditures which now exceed 35 percent of GNP cannot continue to rise forever. Laffer's Curve tells us that private economic efforts will cease somewhere short of 100 percent, confiscatory taxation, a point at which government revenues drop to zero. Perhaps the United States had witnessed, in Jarvis-Gann, the catalyst that will reverse the trend of government growth. More likely, Jarvis-Gann, and other initiatives like it, will help to *slow* this growth so that the long-term government spending curve will follow the asymptotic path that would be predicted for any natural phenomenon as the maximum value (100 percent) is approached. That is, the higher education financial curve will begin to flatten and the rate of growth will begin to slow.

Finally, there remains the possibility that government may continue to grow but that appropriations for higher education may instead decline. Conceptually, it has been seen in the previous section that this is unlikely to occur due to such principles as "fair shares" and "incrementalism." Available empirical evidence supports the theory. Although the *share* of state budgets going to higher education has declined somewhat in recent years, state support in constant dollars has continued to increase, albeit at a slower rate.<sup>14</sup> In 1963, higher

<sup>13</sup> Mosher and Poland, pp. 116-117.

<sup>14</sup> The federal picture is less clear largely because federal assistance has been redirected in part from institutions to students. Thus, although part of student aid funds ultimately accrue to institutions, the time series data showing total federal support of higher education are not comparable.

Public institutions gain approximately 14 percent of direct funds from the federal government and 43 percent from state governments. The federal share has been decreasing during the past decade.



educations's share of state budgets averaged 13.4 percent nationally; in 1971 the share had risen to 14.8 percent; but by 1975 it was back to 13.7 percent.<sup>15</sup> Yet, in absolute amounts, appropriations continue to grow. In the most recent two-year period for which data are available (1976-77 and 1977-78), appropriations rose by 20 percent—a six percent constant dollar increase. The fact that the rate of increase is smaller than in previous years is evidenced by the comparable figures for the most recent ten-year period, when state appropriations grew by 245 percent in current dollars and 83% in constant dollars.<sup>16</sup> Thus, whereas in relative terms higher education is experiencing difficult financial times and whereas higher education's share of state resources is on the average declining, both in real and absolute terms, higher education resources from state governments continue to grow.

Growth in government aid to private or nonpublic institutions is in evidence too, most clearly in growth in student aid. Indeed, student aid in considerable part became a favored federal, and to a lesser extent state instrument of aid to higher education, because such aid legally could be given albeit indirectly to nonpublic institutions—which were in difficult financial straits particularly in the early 1970's. One estimate is that student aid added 1.262 billion dollars and about 250,000 students to nonpublic education in 1975-76.<sup>17</sup>

3. *Enrollments and Their Financial Significance.* Enrollment levels have obvious relationships to the magnitude of government support of higher education as well as to institutional tuition and fee income. Regarding the former, government parsimony is more in evidence when enrollments are declining than when they are increasing. Regarding the latter, the relationship between enrollments and tuition and fee income usually is more direct.

Enrollment levels may be manifested directly in general institutional support in states where funding is by formula or indirectly where some other budgeting approach is used.<sup>18</sup> That is, in formula budgeting states, a certain portion of appropriations are tied directly to enrollments or some closely related measure such as the number of graduates produced, whereas in other states

<sup>15</sup> U.S. Bureau of the Census, *State Government Finance, 1963, 1971, 1975* (Washington: USGPO, 1963, 1971, 1975).

<sup>16</sup> M.M. Chambers, *State Appropriations for Higher Education* (Normal, Illinois: Illinois State University, 1978).

<sup>17</sup> Larry L. Leslie, *The Role of Student Aid in Financing Private Higher Education* (Tucson, Arizona: Center for the Study of Higher Education, 1978), p. 25.

<sup>18</sup> Moss and Gaither identify 25 states in which formula budgeting was used for one or more functions in 1973, 1974, or 1975 (Charles E. Moss and Gerald H. Gaither, "Formula Budgeting: Requiem or Renaissance?" *Journal of Higher Education* 43, No. 5 (September/October 1976): 543-563). However, Glenny *et al.* found that the proportion using formulas to derive major components of appropriations was markedly less (6 of 17 states). Glenny and his associates believe the actual use of formulas is commonly overstated (Lyman A. Glenny; Frank M. Bowen; Richard J. Meisenger, Jr.; Anthony W. Morgan; Ralph A. Purves; and Frank A. Schmidlein; *State Budgeting for Higher Education: Data Digest* (Berkeley: CRDHE, 1975), pp. 46-48 and p. 156).

appropriations are made merely with an eye to the enrollment change over last year. In the formula budgeting states, the theoretical principles and empirical trends discussed above would appear to carry far less weight in predicting future appropriation levels than in nonformula budgeting states. Notwithstanding institutional arguments presently abounding regarding the inappropriateness of formula budgets during periods of enrollment decline and the political pressure that might be anticipated from higher education advocates in an attempt to maintain "fair shares," it would be expected that higher education appropriation changes would bear some considerable resemblance to enrollment changes in formula budgeting states.<sup>19</sup> In nonformula budgeting states, the discussion of previous sections would seem to hold provided that the enrollment declines are not too large.

This brings the discussions to expected enrollment changes in the years ahead. First, the most inclusive statement that can be made regarding enrollments is that forecasts vary tremendously. Among those predicting major enrollment declines are Dresch,<sup>20</sup> Boulding<sup>21</sup> and, in two of his three "scenarios," Froomkin.<sup>22</sup> Mayhew predicts either very modest enrollment decreases or very modest increases.<sup>23</sup> A similarly modest increase is forecast by the United States Office of Education, National Center for Educational Statistics,<sup>24</sup> and only somewhat higher estimates are made by Froomkin in Scenario I and by Cartter.<sup>25</sup> The qualitative analyses of Bowen<sup>26</sup> and Leslie and Miller<sup>27</sup> argue against major declines.

Most existing national enrollment forecasts are based upon cohort-survival techniques, which assume that a certain portion of the youth population will "survive" each educational level and proceed to the next higher level. This procedure has proved fairly valid in the past. However, the dynamics of higher

<sup>19</sup> See Moss and Gaither "Formula Budgeting" for a discussion of why formula budgets in fact create institutional hardships during enrollment declines.

<sup>20</sup> Stephen P. Dresch, "Educational Saturation: A Demographic-Economic Model," *AAUP Bulletin* (Autumn 1975): 239-247.

<sup>21</sup> Kenneth E. Boulding, *The Management of Decline*, Address to the Regents Convocation of the University of the State of New York (Albany, New York: 1974).

<sup>22</sup> Joseph Froomkin, *Changing Credential Objectives of Students in Postsecondary Education*, Washington, D.C.: U.S. Department of Health, Education, and Welfare, Contract #0574257, 1974.

<sup>23</sup> Lewis B. Mayhew, "The Steady Seventies," *Journal of Higher Education* 45 (March 1974): 163-173.

<sup>24</sup> U.S. National Center for Educational Statistics, *Projections of Educational Statistics to 1983-84* (Washington, D.C.: USGPO 1975).

<sup>25</sup> Allan Cartter, *The Ph.D. and Manpower Needs* (New York: McGraw-Hill, 1975).

<sup>26</sup> Howard R. Bowen, "Higher Education: A Growth Industry?" *Education Record*, 55 (No. 3, 1974): 147-158.

<sup>27</sup> Larry L. Leslie and Howard F. Miller, Jr., *Higher Education and the Steady State*, ERIC Higher Education Research Report No. 4 (Washington, D.C.: American Association for Higher Education, 1974).

education enrollments appear to be changing and traditional college-age youth are composing smaller and smaller proportions of total student populations. Thus, traditional cohort-survival strategies are proving less accurate.

As a means of examining higher education enrollment prospects for the '80s, two of the more divergent forecasts listed above will now be examined. These analyses were selected because they represent opposite ends of the forecast continuum and because they are somewhat unique in that they have conceptual or theoretical bases.

The unique component of Dresch's projection is its attention to the connections among education, production, and the structure of the labor force.<sup>28</sup> In short, most other models consider only demographic patterns; Dresch's model adds labor force dimensions. Dresch's framework is that after World War II the excess demand for college educated individuals drove up the proportions of youth who were college educated; and when the extraordinarily large post-war-baby cohort reached college age, the number of college attenders increased dramatically. Dresch's resulting model assumes that the relative wage of college graduates is inversely related to the proportion of college educated persons in the work force, that technological change may permit some increase in this proportion without corresponding reductions in graduates' wages, and that overall the resulting lower wage for college graduates will act to curb college enrollments. Simply put, decreasing wage differentials between the college educated and others will result from excess supply of the former, eventually causing reduced incentive for collegiate attendance.

Dresch estimates that the relative wage for college graduates will reach its equilibrium point in 1979-80, when between 18 and 19 percent of the labor force will be college graduates. However, at this time roughly 30 percent of the age cohort will be entering college due to an "information time lag" regarding existing labor market conditions and wage differentials. Dresch's data also show that the participation rate in 1983 will be an even higher 33.6 percent, after which the rate will begin to decline as wage differential information catches up. According to Dresch's model, the system does not come back into equilibrium until 1999. The overall results are that Dresch projects an enrollment contraction of 40 percent in the 1980's and an additional 12 percent contraction in the 1990's.

The approach taken by Leslie and Miller is quite different. Leslie and Miller utilize a kind of Mosher-Poland approach to higher education enrollments. They begin by showing empirically how enrollments have grown in the United States since national records were begun in 1890 (see Figure 1).<sup>29</sup> Major aberrations occurred during the depression, during World War II and after World War II but

<sup>28</sup> Dresch, "Educational Saturation."

<sup>29</sup> Leslie and Miller, p. 14.

the long-term trend clearly conforms to patterns identified by Mosher and Poland in considering growth in domestic spending. The implicit assumption is that certain forces act to maintain enrollment inertia just as financial levels are maintained.

Leslie and Miller explain how this occurs. In contrast to Dresch they focus almost entirely on the "supply side" of higher education, arguing that during difficult times collegiate institutions act quite similarly to business entrepreneurs by seeking innovations that will allow them to maintain their positions in the market place. Borrowing a framework from Joseph Schumpeter, they argue that higher education is and will continue to seek growth, or at least stability, in five ways:

- (1) *The introduction of a new good or a new grade of good already in use* — e.g., new degrees, new programs.
- (2) *The introduction of a new method of production* — e.g., external degrees, community colleges, television courses.
- (3) *The opening of new markets* — e.g., older students, women, minorities.
- (4) *The employment of new sources of supply of production factors* — e.g., new money sources such as increased tuitions and government appropriations, private giving, and indirectly through student aid and tax credits.
- (5) *The reorganization of an industry, several industries, or part of an industry* — e.g., consortium, amalgamation, and state systems.<sup>30</sup>

Some of these innovations represent attempts to increase enrollments, while others relate directly to obtaining more resources.

Although Leslie and Miller do not project enrollments, the principles they identify are reflected directly in the methods and resulting 1975 projections of the Carnegie Foundation.<sup>31</sup> The Foundation's projections (which forecast modest growth to 1985, then slight decreases to the early 1990's and again modest growth to 2000) are designed to take into account already visible enrollment increases among part-time students, non-degree-credit students, older students, women, and minority members.<sup>32</sup>

Clearly, the results of Dresch's analysis and the implications of the work of Leslie and Miller are not consistent. One calls for future major enrollment

<sup>30</sup> Leslie and Miller, pp. 24-25.

<sup>31</sup> The Carnegie Foundation for the Advancement of Teaching, *More Than Survival* (San Francisco: Jossey-Bass, 1975).

<sup>32</sup> Carnegie Foundation, Chapter 4.

declines, the other for perhaps modest increases. The reasons for the differences seem clear: the factors considered by each differ and largely ignore the other.

Dresch, in focusing almost exclusively on manpower constraints, may have ignored or understated (1) the significance of the institutional "counter moves" identified by Leslie and Miller; (2) the "consumption," as opposed to investment, aspects of higher education: enrollment; (3) the considerable reduction in "net price" of attendance for many students due to student aid; (4) the non-pecuniary private benefits of higher education; (5) non-traditional student age groups; and (6) the likelihood that college graduates will merely displace other workers thereby creating a new set of wage relationships.<sup>33</sup>

On the other hand, Leslie and Miller give no attention whatsoever to precisely what Dresch identifies as the major constraint on enrollment growth: labor force realities. Leslie and Miller's approach is similar to older cohort-survival techniques except that several new cohorts are considered. The implicit assumption made by Leslie and Miller is that forerunners of the enrollment developments of the '80s must necessarily already be evidenced in recent enrollment trends for various student groups, such as women and minorities. In short, Leslie and Miller place an unusual emphasis upon historic trends.

Since the Dresch and Leslie and Miller analyses consider quite different enrollment factors — each of which seems germane to future enrollment levels — it would appear logical to conclude that future levels will lie somewhere between the two projections. That is, a synthesis of the two works would suggest a more moderate enrollment future than either has projected. In sum, the forces identified by Leslie and Miller should act to cushion the wage-differential effect noted by Dresch.

Some empirical evidence supporting this more moderate middle enrollment forecast is now available. Dresch's model projected a 1970-1980 degree-credit enrollment increase of 40 percent, with "virtual stability" between 1975 and 1980. In other words, essentially all of the 40 percent growth was to occur in the first half of the decade. However, from 1970-75, degree credit enrollments went up by only 20 percent and after a slight decline in 1976, increased by 3.2 percent in the fall of 1977 and by about 3 percent in the fall of 1978. The actual 1970-75 increase was only half that projected by Dresch and the stability forecast for 1975-80 has not been in evidence so far. Assuming Dresch's theory to be correct, the information time lag has apparently been less than assumed and other forces are so far acting to maintain enrollment growth, however small. This may be in part because the less-than-expected enrollment increases of 1970-75 acted to moderate the college-noncollege wage differential, making collegiate attendance a more rational economic decision than otherwise would have been the case.

<sup>33</sup>One cannot be certain as to what extent the robustness of Dresch's model may account for part of these effects.



Finally, this subject cannot be left without at least token recognition of institutional enrollment variations. What may be true for the nation as a whole will not be true for every institution. Whatever the level of overall enrollments, certain kinds of colleges and certain regions of the country will experience different enrollment trends. For example, major research universities will experience relative enrollment stability; and in all but one of the Rocky Mountain States (Montana), even the number of 18-year-olds will increase until at least 1985. To the institutions, these variations will be far more relevant than will be the national statistics.

### Other Income Categories

For public institutions, to a considerable extent, government appropriation levels are the keystone to how much will be raised in other institutional income categories. In many states, for example, tuition and fee prices are set only after the size of the state appropriation is known, and tuition is used as the budget balancing instrument. In other states the sequence may be reversed, but a dependent relationship between and among the various income categories persists. Put another way, once the amount of government assistance is known, most other income amounts logically follow.

1. *Tuition and Fees.* Whether the institution is public or nonpublic, tuition and fee income to a major degree represents the flexibility that allows a college or university to balance its budget. After all other income sources are estimated or known, the amount that is still needed essentially is divided by the number of students anticipated next year, and the tuition and fee price is thus obtained.

In recent years income from tuition and fees has grown quite sharply. Between the fall of 1964 and 1976, public college tuitions rose by 145 percent and nonpublic tuitions rose by 133 percent. In constant dollars the increases were 33.3 and 26.6 percent, respectively.<sup>34</sup> The major reason for these increases is that institutions have sought to maintain a more or less constant income growth while other direct income sources, particularly those from government, often have grown somewhat more slowly.<sup>35</sup>

A major reason for this slower growth has been the attempt by government to redistribute its subsidy somewhat by increasing aid directly to students. In order to recapture the public subsidy "lost," institutions have been inclined to raise tuitions, especially in the public sector. Thus, a moderately changed

<sup>34</sup> Larry L. Leslie, *Higher Education Opportunity: A Decade of Progress* (Washington, D.C.: American Association for Higher Education, 1977), Tables 3 and A-3.

<sup>35</sup> Based upon a regression analysis of 22 variables used to predict tuition levels in 50 major state universities, Rusk and Leslie observe that "... adjusting state appropriations seems to be the major way to affect tuition levels." (James J. Rusk and Larry L. Leslie, "The Setting of Tuition in Public Higher Education," *The Journal of Higher Education*, (forthcoming.)



institutional aid-tuition and fee income distribution has obtained in many institutions of higher education.

The future would appear to hold a continuation of this trend. The prevailing public priority for higher education continues to be to aid the needy through student aid, and the necessary resources will most surely come in part from a reduction in the rate of growth of direct institutional aid. For their part, institutions will seek to capture these student aid resources through higher tuition prices. Institutions will be further encouraged in this direction by student aid regulations that increase the amount of the student subsidy institutions may capture when the institutions themselves increase their charges to students.

Yet, this tendency for tuition and fee incomes to rise will be moderated by predictable constraints; this is why moderate growth in this income category is forecast. In the public sector the major constraint is political. Higher tuitions bring public outcries, especially from parents of students and students themselves. The fact that the latter group now possesses the franchise is a fact that does not escape the political office holder. Thus, in raising tuition prices, state governments and their agencies, i.e., collegiate institutions, are constrained by the same sort of limits on incrementalism that prevails when appropriations are increased or reduced. How much they charge the public must be closely related to what they charged last year, just as the amount budgeted this year must be related closely to how much was budgeted last year. In short, tuition increases are permitted, but they must be gradual and incrementally small.

In private institutions competition is a major constraining force. The greater the contrast between private college prices and public college prices, the smaller the enrollments of the former will be, and therefore the smaller their tuition incomes will be. Indeed, across both kinds of institutions, if tuition and fee prices rise too high, total tuition and fee income will decline as market forces come into play. In this, college students obey a near universal economic principle: they purchase less of a good or service as its cost rises.

2. *Special Income Sources.* The remaining major category demanding attention includes all forms of gifts, grants, contracts, and endowment income.<sup>36</sup> Although government behavior in the grants and contract areas should conform to principles already discussed, private giving follows another pattern.

The importance of gift and endowment income to institutions is almost impossible to overstate. For public institutions, particularly universities, this is the major source of relatively unrestricted spending. Institutions utilize their gift

<sup>36</sup>The remaining large income source not discussed is sales and service, which primarily consists of auxiliary enterprises. However, auxiliary enterprise budgets are intended to be self-supporting; that is, income to run such services as dormitories, hospitals, and food services is not available ordinarily for academic or other functions. Expenditures are ordinarily limited to providing the services themselves.

and endowment income for such purposes as financing experimental programs, for instructional innovations, and for other purposes that may be "high risk" or politically difficult to support with public funds—or in the case of private colleges, with tuition funds. In short, gift and endowment income is what "makes the difference" for many institutions.

Forecasting the future trends for this income category is encumbered by one major uncertainty: the future state of the economy. The amount of voluntary giving for higher education in recent years appears to have been affected importantly only by the advent of economic recession. Even the alleged loss of public favor for higher education in the late '60s did not appear to affect voluntary support in a major way. Voluntary giving, which was only a very minor factor in higher education financing prior to World War II, reached \$900 million in 1960 and grew steadily in the 1960's until it reached \$1.860 billion in academic year 1970-71.<sup>37</sup> In the following years, total voluntary support passed the \$2 billion mark and only during the economic recession of 1973-74 was the trend reversed. By 1975-76, the lost ground had been more than recovered and growth was resumed at an annual rate of over 10 percent. In 1976-77, total voluntary support for higher education stood at \$2.670 billion.

In addition to changes in the state of the economy, the other major factor that might affect growth in voluntary giving is changes in the tax laws. Should tax regulations governing private and corporate giving be altered, higher education would be affected accordingly. Although such changes are discussed in the Congress periodically, it seems unlikely that colleges, with their broad constituencies of students, parents, public officials, public benefactors, and church groups would be the target of such changes. Political principles dictate against this occurrence.

In sum, continued growth in voluntary support of higher education seems relatively assured on the basis of past patterns. In fact, one might hypothesize that if colleges and universities do find themselves in severe economic trouble, increased private giving might be anticipated.

## SYNTHESIS

Together, the concepts and empirical evidence reviewed would seem to suggest a financial future for higher education that is brighter than the mood on most college campuses as the prospects for the '80s are contemplated. Principles that operate in the political arena and historic patterns of government financial growth appear to indicate continued expansion in government support, albeit at a slower rate than was experienced in the recent past. This expectation for slowed growth in government support is reinforced by the advent of Proposition 13-type tax limitations that are emerging in several states, and in associated

<sup>37</sup> Council for Financial Aid to Education.

indications of fiscal restraint on the part of the Congress. Indeed, one cannot be certain that such changes will not alter the entire course of government spending and that less optimistic forecasters will be proven correct, although in historic context this seems most unlikely.

An additional factor that will have impact on the trend line of government support will be changes in collegiate enrollments. Unfortunately, estimates of these enrollments for the '80s are at considerable odds. Nevertheless, a synthesis of two divergent enrollment forecasts having strong conceptual and empirical bases, suggests only modest to moderate enrollment declines for most institutions. The impact of this decline on state support should be to slow the rate of resource growth still farther, perhaps to the point of near stability in constant, though not in current, dollar income.

Tuition and fees and voluntary giving are the income sources that have allowed institutions to absorb much of the effects of the just slowed growth in direct government assistance to institutions. (Simultaneously, however, growth in student aid funds from government has partially offset the impact of tuition and fee increases on students.) *In toto*, it is projected that whereas direct government support of higher education institutions will grow at a slow rate in the 1980's institutional incomes from all sources will continue to grow in the '80s at a rate that is only moderately reduced.

Some empirical support for this projection of continued growth in total institutional revenue is available. Perhaps the prototype for what will happen in higher education in the '80s is the experience of the public schools, where enrollment downturns have already occurred. Public school adjusted (for inflation) *per pupil* direct expenditures, which increased at a rate of .6 percent per year in the 1950's, grew at a 2.0 percent rate in the 1960's and so far have grown at an annual rate of 2.5 percent in the 1970's when enrollments in fact declined.<sup>38</sup>

Although it may be too early to tell what will happen in higher education as enrollments turn down, comparative data for the 1970's do show what has occurred when the rate of enrollment growth has slowed. The major finding is that after declining in the early 1970's, *per pupil* expenditures for higher education actually have risen at a rate faster than was experienced during the 1960's—the supposed “Golden Decade” of American higher education.<sup>39</sup> The average national increase in *per student* expenditure in the 1960's was 6.7 percent and, after declining to about 3 percent in 1971 and 1972, became 8.5 percent in 1974 and 10 percent in 1975. When adjustments are made for inflation, this pattern holds, with *real per student* percentage increases for these

<sup>38</sup> Elchanan Cohn, “The Costs of Formal Education.” Data are adjusted for inflation by use of a salary index.

<sup>39</sup> Although these are expenditure data, in the aggregate, income data are very similar.

last two years growing to 2.5 percent and 3.2 percent, respectively.<sup>40</sup> Further, average increases were larger in the private sector. The private institution per student increases, which had averaged 8.9 percent in current dollars in the 1960's, once again reached this rate in 1974 and became 11.3 percent in 1975.

Whether these patterns will persist in the 1980's is unclear. One cannot be at all sure what the effects of the tax revolt that is presumably emerging will be, and this or some as yet unidentified event might well change the course of future events. However, the long-standing and present vitality of higher education in America—its ability to maintain a relatively even keel in a rapidly changing economic and social milieu—is clearly in evidence; and it seems unlikely that normal events of non-crisis proportions will alter this inertia importantly.

TABLE 1  
Estimated Income Sources of Institutions of Higher Education,  
by Sector, 1976-77

|                                        | Public                 |          | Nonpublic              |          |
|----------------------------------------|------------------------|----------|------------------------|----------|
|                                        | Amount<br>(\$billions) | Per Cent | Amount<br>(\$billions) | Per Cent |
| TOTAL                                  | 26.8                   | 100.00   | 12.8                   | 100.00   |
| Tuition and Fees                       | 3.6                    | 13.4     | 4.7                    | 36.7     |
| Governments                            | 17.4                   | 64.9     | 2.7                    | 21.2     |
| Sales and Services                     | 4.4                    | 16.5     | 3.0                    | 23.4     |
| Gifts, Grants,<br>Contracts, Endowment | .7                     | 2.6      | 1.9                    | 14.8     |
| Others                                 | .7                     | 2.6      | .5                     | 3.9      |

SOURCE: USDHEW, NCES, unpublished data

<sup>40</sup>See Cohn, Table 8. Adjustments for inflation follow the scheme used by Cohn for elementary-secondary education. The Salary Index was developed from data supplied by the Department of Labor and Commerce, the AAUP, and from the *Digest of Educational Statistics*, 1974, p. 90. If the Halstead Higher Education Price Index were used to deflate figures, the pattern would remain although the magnitudes would be reduced somewhat.

## BIBLIOGRAPHY

- Boulding, Kenneth E., "Management of Decline." Address to the Regents Convocation of the University of the State of New York, Albany, New York, 1974.
- Bowen, Howard R., "Higher Education: A Growth Industry?" *Education Record*, LV (Summer, 1974), 147-158.
- The Carnegie Foundation for the Advancement of Teaching. *More Than Survival*. San Francisco: Jossey-Bass, 1975.
- Cartter, Allan. *The Ph.D. and Manpower Needs*. New York: McGraw-Hill, 1975.
- Chambers, M.M., *State Appropriations for Higher Education*. Normal, Illinois: Illinois State University, 1978.
- Cohn, Elchanan., "The Costs of Formal Education in the United States, 1950-1975," *Journal of Education Finance*, III (Summer, 1977), 70-81.
- Dresch, Stephen P., "Educational Saturation: A Demographic-Economic Model," *AAUP Bulletin* (Autumn, 1975), 239-247.
- Froomkin, Joseph. *Changing Credential Objectives of Students in Postsecondary Education*. Washington: U.S. Department of Health, Education, and Welfare, Contract #0574257, 1974.
- Glenny, Lyman A., et al. *State Budgeting for Higher Education: Data Digest*. Berkeley: Center for Research and Development in Higher Education, 1975.
- Leslie, Larry L., *Higher Education Opportunity: A Decade of Progress*. Washington: The American Association for Higher Education, 1977.
- \_\_\_\_\_. *The Role of Public Student Aid in Financing Private Higher Education*. Tucson, Arizona: Center for the Study of Higher Education, 1978.
- \_\_\_\_\_. and Howard F. Miller, Jr., *Higher Education and the Steady State*. Washington: The American Association for Higher Education, July, 1974.
- Lynn, Arthur D., Jr., "Taxes, the Price of Civilization," *Arizona Daily Star*, September 10, 1978, F. 4.
- Mayhew, Lewis B., "The Steady Seventies," *Journal of Higher Education*, XLV (March, 1974), 163-173.

- Mosher, Frederick C., and Orville F. Poiand. *The Costs of American Governments: Facts, Trends, Myths*. New York: Dodd, Mead & Company, 1964.
- Moss, Charles E., and Gerald H. Gaither. "Formula Budgeting: Requiem or Renaissance?" *Journal of Higher Education*, XLIII (September/October, 1976), 543-563.
- Rusk, James J., and Larry L. Leslie. "The Setting of Tuition in Public Higher Education," *The Journal of Higher Education*, forthcoming.
- U.S. Bureau of the Census. *State Government Finance, 1963, 1971, 1975*. Washington: U.S. Government Printing Office, 1963, 1971, 1975.
- U.S. Department of Health, Education, and Welfare, National Center for Education Statistics. *Digest of Educational Statistics*. Washington: U.S. Government Printing Office, 1974.
- U.S. Department of Health, Education, and Welfare, National Center for Education Statistics. *Projections of Education Statistics to 1979-80, Projections of Education Statistics to 1983-84, Projections of Education Statistics to 1986-87*, Washington: U.S. Government Printing Office, 1972, 1975, 1978.
- Wagner, Adolph. *Grundlegung der Politischen Okonomie*. Third edition. Leipzig: C. F. Winter'sche Verlagshandlung, 1893.
- Wildavsky, Aaron. *The Politics of the Budgetary Process*. Second edition. Boston: Little, Brown and Company, 1974.



## CHAPTER III

### UNUSED CAPACITY: OPPORTUNITY OR DISASTER?

*Howard R. Bowen*

The number of persons seeking higher education in the United States may fall off in the years ahead. The number of births began to decline beginning about 1960. Consequently the number of persons of traditional college age will inevitably begin to taper off around 1980. Moreover, the earnings of college-educated workers may be declining relative to the earnings of other workers. The economic incentive for attending college may therefore be diminishing and the percentage of each age cohort attending could decline.

As I shall try to show, the oft-predicted fall in enrollment is by no means inevitable. One can easily imagine scenarios in which the number of students would remain steady or grow over the next several decades – even assuming no social intervention designed to increase college attendance. But without positive intervention the probabilities are high that enrollment will fall off and that the higher educational system will develop unused capacity. In that event, the nation will be faced with some difficult decisions: Should the excess capacity be shut down with deliberate speed? Should the excess capacity be used to accommodate new student clienteles? Should it be employed to improve educational quality? Should it be used to mount new and useful programs of research and public service? Or, possibly, should some of all these things be done? The purpose of this paper is to consider the policy issues relating to the potential decline in college and university enrollments. A useful first step will be to sketch out a theory of the mutual adjustment between the demand for higher education and the capacity of the higher educational system.

#### **The Interaction of Demand and Capacity**

The higher educational system is capable at any given time of handling a fairly specific load of students, research work, and public service activities. The load for which the system is designed is its *capacity*. The capacity is determined by the number of qualified faculty and staff employed and by the amount of available building space and equipment, and these are the resultant of a myriad of past decisions which may or may not have been appropriate to later conditions.

The *demand* for higher education at any given time is the amount of instruction, research, and public service the society wishes to use — given the terms on which these services are available. The terms in the case of instruction includes the level of tuition, the amount of student aid, admissions standards, the kinds of instructional programs offered, the convenience or accessibility of these programs, the state of the job market, the degree of prestige attached to education, etc. The terms in the case of research and public service include the kinds of programs offered, the accessibility of these programs, and the fees charged if any.

Demand and capacity are not at all times in mutual adjustment. Demand tends to be more volatile than capacity. Under some circumstances — for example, the return of veterans after World War II, — demand may be greater than capacity and the higher educational system may experience overloads. At other times — for example, in the Great Depression, in World War II, and in the early 1950's after the departure of the GI's — demand may be less than capacity and the system may develop slack. As the system evolves over time, there is a constant interplay between demand and capacity and a great deal of higher education policy may be construed as adjustments designed to bring the two into congruence. One mode of adjustment is to adapt the capacity of the system to the demand by adding or subtracting resources. Another mode of adjustment is to adapt the demand to the capacity. For example, in a situation of overload, "quality" may be reduced, the entry of students may be restricted, or the research and public service load may be reduced; or in situations of excess capacity, "quality" may be raised, the entry of students may be encouraged by subsidies or other means, and the load of research and public service may be increased.

It is often taken for granted that the capacity of the system should be adjusted to demand rather than demand to capacity. However, demand is not a wholly independent variable. It is strongly influenced by deliberate policies such as admission, fees, student financial aid, programs offered, released time from work, or certification requirements. Therefore, it may sometimes be in the public interest to modify these conditions and thus to adjust demand to capacity. In considering policy for a time of declining enrollment, therefore, decision makers should consider not only cutting back on the capacity of the higher educational system, but also putting any excess capacity to work by increasing the services rendered. In reaching a sound policy for a time of declining enrollments, there are at least three important considerations to take into account.

First, the decision will be influenced by judgments about the social value of additional services, for example, increasing the student population, expanding research and public service, or improving the quality of existing programs. Since expansion or improvement of services may involve some new incremental costs — for example, financial aid to students or new equipment for research — judgments about social value will have to take account of these costs.

Second, the decision will be influenced by judgments as to the savings that might be achieved through cutting back on the amount of resources in higher education. From the social point of view, the savings would depend on the ability to transfer these resources out of education and into other productive uses, and on the value of the resources in these alternative uses. It is not a simple matter to move specialized plant and equipment and specialized personnel out of higher education into other productive uses. Eventually, of course, it is possible to shift resources through attrition. But the process can be speeded up by selling or leasing academic land and buildings for non-educational purposes and by discharging faculty and staff. However, much of the physical capital and many of the staff members are likely not to be very productive in alternative uses. Moreover, society may be hesitant about abrogating contracts relating to tenure and job security — especially because of adverse effects on the ability to attract people to academic work in the future or because of fear of collective bargaining. The processes of expansion and contraction in higher education are not symmetrical. More time is needed to depreciate existing buildings and equipment and to reduce the size of staff than to acquire new capital assets and to train and employ new faculty and staff.

Third, decisions will be influenced by judgments on the long-run, as well as the short-run, outlook for enrollment. The response to an expected short-run decline in enrollment will be different if the reduced enrollment is expected to persist over a long period than if an early recovery is anticipated. For example, current demographic projections show a decline in the 18 to 24 age group during the ten-year period 1986 to 1995, but thereafter show a recovery to former levels. Decision makers would be less likely to retrench if they thought a lower level of enrollment would be temporary than if they thought it would continue indefinitely. They might reason that there would be little point in partially dismantling the higher educational system for an enrollment dip lasting, say, only a decade. The distant future, however, is very uncertain. It is true that something can always be deduced from statistics on birth and mortality about future age cohorts of the total population. But it is not possible to know with any assurance what proportion of each age cohort will be in college in any given future year. The participation rate is affected by the condition of the economy and the job market, the state of technology, whether the nation is at war or peace, events comparable to the launching of Sputnik, fluctuating public attitudes toward education, and a host of other influences. For example, if one were to place oneself retrospectively in the year 1940, would one have predicted three major wars, 40 years of uninterrupted prosperity, the Cold War and Sputnik, spectacular new technologies (nuclear energy, computers, space exploration, and many others), wide swings in the birth rate, the drive for racial equality, and the women's movement? Moreover, would one have predicted new policies such as the GI Bill, innovative forms of student aid, the establishment of hundreds of community colleges? As it turned out, all of these had enormous effects on the demand for higher education, yet all were essentially unpredictable. As we look ahead, who can say what influences will come to bear upon higher educational enrollments — even if our basic policies relating to tuition, student aid programs, etc., remain unchanged? In view of deep

uncertainties about the future, humility and caution would become the decision makers for higher education lest they reach premature judgments about future demand.

Fourth, the past experience of the United States suggests that demand has responded to supply as much as supply has responded to demand. The land grant and community college movements, for example, undoubtedly stimulated demand by the presence of supply. The same could well happen in the future for adult learning.

### **The Enrollment Outlook**

I am by no means certain that there will be a decline in aggregate enrollment — even if there are no significant policy changes to encourage increased numbers. There will be declines in some parts of the country and certainly in some types of institutions. The situation is bound to be very uneven. But in the aggregate, the range of possibilities is very wide and it is not wildly unrealistic to envision the possibility of no decline or even of an increase in enrollment.

I have experimented with various assumptions to determine under what conditions enrollments would remain steady over the remainder of the century. For example, I found that with one set of moderate assumptions it was possible to produce a model of stable enrollment. The assumptions are very simple:

- (1) The birth rate would rise to 2.1 per woman and remain steady at that level throughout the period. This is the level of fertility required for the population to maintain itself in the absence of net immigration. It is the level of fertility, according to a recent Census survey, that American women expect to maintain.
- (2) The percentage of persons 16 to 21 attending college would remain at the level attained in 1976: 3.4 percent for those 16-17 years of age and 33.4 percent for those 18 to 21.
- (3) The percentage of persons attending in the various age groups 22 and over would increase steadily over time according to a projection of a straight-line regression curve for the years 1970-76.

With these rather moderate assumptions, total (head count) enrollment would increase by about 50 percent during the rest of the century and that full-time equivalent enrollment would also increase substantially. But more surprising, in no single year would there be any decline in enrollment. The explanation of these results is simply that college enrollments are no longer dominated by the 16 to 21 age group, but rather by older age groups.

The plausibility of these results is strengthened when one considers several factors that may tend to increase the demand for higher education in the years ahead. One factor is that important changes are taking place in the American family. It is becoming predominantly a two-earner family, with fewer children per family, with the children spaced farther apart in age than formerly. These changes affect the financial ability of families to afford higher education. Also, the spread of education in our society is tending to strengthen the desire of parents to send their sons and daughters to college. At the same time, it is increasing the demand for adult learning because educated people are big consumers of continuing education. Another factor is that the nation is nearing the end of the congestion in the labor market due to the glut of young people and women seeking jobs. In another decade, the number of new entrants to the labor force will be considerably smaller and the job outlook should improve. Consider, also, the entrepreneurial ability of colleges and universities, many of which have shown themselves to be very nimble in developing new "markets" for their wares. The new "market" mentality may in some cases mean lowered standards or sacrifice of liberal arts traditions, but in many cases it may open up new opportunities for useful service.

Please note: I am *not* predicting that there will be no decline in enrollments over the next decade or two; I am suggesting only that it is not wildly fanciful to recognize that the much heralded decline may not materialize or that it may be less than many believe or that it could be averted by deliberate policy. Nevertheless, we all know that the American higher educational system is vulnerable to enrollment decline. The issues are complicated, however, because any demographic or other changes influencing enrollments will affect different parts of the country or different types of institutions in quite diverse ways. There is little doubt that the changes that lie ahead will cause pain in some quarters.

My thesis is simply that any unused capacity that may develop may be put to good use rather than be dismantled. It may be regarded as an opportunity rather than as a disaster. The nation might well go slowly in preparing to dismantle substantial parts of the higher educational system — especially as the dip in enrollment may be averted or may prove to be temporary.

### Three Historic Episodes of Unused Capacity

Another step in considering the future is to review past experience in dealing with unused capacity. In the twentieth century so far, there have been three episodes of substantial enrollment decline. Enrollment decline is not new to American higher education. One of these episodes was during the great depression of the early 1930's when enrollment fell by at least 9 percent; another was during World War II when the decline was more than 23 percent; and the third was in the early 1950's after the departure of the GI's when the

decline was over 13 percent.<sup>1</sup>

In no one of these episodes did substantial cutbacks in number of faculty occur. In the Great Depression, the number of faculty increased, in World War II it held steady, and in the post-GI period it declined by about 1 percent. As to educational and general expenditures (expressed in constant dollars), there were substantial cutbacks during the Great Depression but only slight retrenchment in World War II and no retrenchment at all in the post-GI period. However, in all three episodes there were substantial cuts in capital expenditures. The main effect was clearly a reduction in spending for buildings and equipment. On the basis of these three episodes, one may conclude that the traditional way of handling enrollment decline in the United States has been to maintain faculty, to slow up moderately the growth of current expenditures, and to reduce plant fund expenditures sharply. It did not happen exactly that way in all three cases, but generally that was the pattern.<sup>2</sup>

### The Options

It might be possible and prudent at a time of excess capacity in the higher educational system to redirect surplus resources into new uses. The options are these:

1. To improve quality
2. To increase enrollment
3. To provide new or expanded services in research and public service.

It is not necessary to spell out these possibilities in great detail. Any experienced educator is aware that there is almost no limit to the horizons of higher education when resources are available.

Regarding quality, it can be argued that during the era of expansion in the 1950's and 1960's and the time of austerity in the 1970's, higher education has been preoccupied with numbers and with survival and that *quality* has been neglected. A time of excess capacity would be ideal for diverting resources to qualitative improvement. Such improvement could relate to instructional program and method, to evaluation and accountability, and also to overcoming deferred maintenance not only of plant and equipment but also of human resources. The deterioration of secondary education in recent decades should be a warning to college and university educators. The same thing could happen to them. Serious attention to quality could produce a large payoff. No one can

---

<sup>1</sup> Because data are available only biennially, there are no exact figures on the degree of change from year to year. The percentages given are undoubtedly less than the percentage changes from peak to trough.

<sup>2</sup> It is perhaps noteworthy that during the recent decline of elementary school enrollment the number of elementary school teachers has not decreased.



doubt that there are literally millions of people not now served by higher education who might be added to the student clientele. Consider, for example, that persons from low-income families attend in much smaller numbers than those from high-income families, that the percentage attending college in some states is far less than that in other states, that there are at least 90 million adults 25 years of age and over who have never been to college, that the needs and requirements for continuing education among professional and business groups who have been to college constantly expand as the nation moves toward the post-industrial society. Consider also that the spread of higher education has tended to increase the numbers of people who will expect their children to attend college and the numbers who will themselves take part in adult learning. I would add also that colleges and universities might with benefit to the nation become more active in the education of students of secondary school age.

Up to now, four-year colleges and universities have not brought the education of non-traditional students into the mainstream of their operations. The reasons for this are partly that funding agencies have not provided the needed operating funds and student aid, and partly, it must be admitted, to a certain squeamishness among the more traditional institutions about going wholeheartedly into the non-traditional educational business. In my opinion, it is time for institutions of all kinds to fold non-traditional study into their regular programs — assigning regular faculty and facilities to it, including it in regular degree programs, providing adequate financial aid, and conducting it in a way that is comparable in status and resources to conventional instruction for traditional students. The appearance of unused capacity in the traditional programs offers a marvelous opportunity for funding agencies finally to bring non-traditional study into the mainstream.

The possible onset of unused capacity also creates an opportunity to strengthen research and public service programs. Research expenditures in current dollars have of course increased steadily. But in constant dollars, they have been pretty flat since 1969. Many close observers of the state of research believe that the United States is falling behind in *basic* research which is the area of higher education's principal contribution. Many observers also believe that opportunity for the development of younger scientists and other research scholars is shut off by the slow growth in research expenditures which creates few jobs for younger people. They also indicate that the cost of equipment and other facilities rises faster than the general price level so that the rate of growth in real terms is even less than is shown by the deflated expenditure figures. Finally, they point out that research support for the humanities and social studies has never approached adequacy and that more funds could be used to advantage in these fields — especially since the employment of humanists and social scientists is likely to be slack.

These same arguments are seldom applied to public service programs. However, a case may be made for using some of any future unused capacity to

extend and strengthen public service programs in fields such as elementary and secondary education, public health, energy, land use, natural resources, state and local government, small business, urban transportation, housing, crime, etc. Collectively, the colleges and universities have enormous resources of talent and knowledge in virtually all fields. Indeed one of the major social contributions of higher education is the maintenance of a corps of experts who are available to society to help in coping with social problems. These resources could be mobilized more effectively than they commonly are to deal with the ongoing social problems of higher education.

The expansion of research and public service to employ some of the unused resources would affect mainly a hundred or two institutions in which the bulk of academic research and public service is conducted. However, the thousands of colleges and other institutions which are mainly concerned with teaching also have, collectively, substantial numbers of highly-qualified researchers, scholars, and experts who regularly conduct research and public service. Some of them might be shifted to research and public service activities. The expansion of research and public service activities in all types of institutions would be not unrelated to the improvement of instructional quality. Many observers of higher education believe that participation of institutions in research and public service enriches the experience of faculty and students by broadening their horizons and exposing them to the world of intellectual and practical affairs.

Retrenchment is of course the alternative to expansion along the lines I have suggested. As I read the official demographic projections, the probabilities are high that the population will expand in the latter years of this century and in the first half of the 21st century. The widely-predicted dip in enrollment, if it occurs, is likely to be temporary and this argues for caution in cutting back higher education. Moreover, the resources in higher education, if shifted to other uses — by selling surplus land, selling or leasing surplus buildings and equipment, and by discharging faculty and staff — are not likely in the short run to add greatly to the national product. In the longer run, they would; but in the longer run they will probably be needed in higher education. My judgment is that any surplus of resources in higher education could be used more productively within higher education than if shifted elsewhere.

The current political climate, on the other hand, seems to favor cutting back tax-supported activities such as higher education in favor of personal disposable income to be spent on goods and services for private consumption. However, the evidence on public attitudes toward education is mixed. On the one hand, many proposed bond issues have been defeated, thinking along the lines of Proposition 13 seems to be spreading, the fighters in the war against inflation are calling for curtailment of public spending, and political statements critical of higher education are frequent. Yet, on the other hand, college enrollments have held up surprisingly well, poll after poll has indicated that an overwhelming majority of people want their children to attend college, older adults are flocking to college

as never before, and the Congress has just handsomely expanded student financial aid to include substantial provision for middle-income groups, and the tax credit proposal is far from dead. So I am not prepared to assert that the people of this country value higher education so little that they want it partially dismantled.

A decision one way or the other on the retrenchment of higher education is today premature, in my opinion. There are great uncertainties about the future. The range of possible enrollments is very great. It is by no means certain that a decline will occur, or ought to occur. Even if a decline in enrollment should take place in the next decade or two — and I am not saying that it will or will not happen — there is a fair probability that enrollments might recover in later decades. The higher educational system has been built up at great cost and effort over many years. While it has weaknesses and problems, it is the world's foremost higher educational system. It represents a noble experiment in which a nation has been trying to bring enlightenment to the greatest possible proportion of its people. The experiment is not yet complete; its purposes have only been partially fulfilled. To cut back in the near future because of what might be only a temporary decline in number of students would be less appropriate than to keep the system at its present scale by giving greater attention to quality and by adding new clienteles and new functions in the areas of research and public service. The proper national policy should be one of cautious flexibility which would include the possibility of quality improvement, new clienteles, and new missions as well as cutbacks. In this connection all funding agencies should be thinking about new financial arrangements. For example, there is need for early consideration of student aid for non-traditional students, of the possibility of encouraging and funding quality improvement, of new initiatives in research and public service. Plans in these areas should be in place before any expected downturn in enrollment occurs and they should not go into effect until they are needed to take up the slack of unused capacity. The present close dependence of institutional finance upon enrollment should be re-examined with a view to making the finances of institutions less dependent upon their enrollments. It may be time to reconsider programs of institutional aid as well as aid to students.

### **Institutional Differences**

The events that lie ahead will have quite different impacts upon different types of institutions. A major problem for the nation will be to respond to change in ways that will be equitable and retain healthy diversity among institutions. For example, the decline in numbers of persons of traditional college age is almost certain to have a relatively heavy impact on liberal arts colleges as compared with universities. It is likely that rural institutions will have greater difficulty cultivating adult markets than urban institutions. Community colleges appear to be better positioned to serve minority groups and older

students than the old-line universities. Famous institutions with huge applicant lists will be better off than obscure institutions which have to struggle to fill their enrollment quotas. In general, the public sector may be better off than the private sector (except for the relatively few distinguished private institutions). Even if aggregate enrollments can be maintained, some types of institutions will face rough times. Do these differential impacts call for special policies? If so, what kinds of policies?

### **Financial Implications**

Let me now consider the implications of what I have said for the financing of higher education.

The financial arrangements for higher education, as they have evolved over recent years, are primarily enrollment driven. The funds are derived mainly from tuitions, originating partly in federal and state programs of aid to students, and from state appropriations allocated more or less in proportion to enrollment. The only sizable funds that are not enrollment-related are categorical grants for research, public service, and a few special training programs and also income from endowment. Endowment income, of course, is important in only a few institutions.

The heavy dependence on enrollment as a source of finance presents serious financial peril to higher education at a time when the number of students may fall. Even if enrollment in the aggregate does not decline, it is bound to fall off in some types of institutions and so the peril exists almost regardless of overall enrollment trends. Moreover the heavy emphasis on enrollment in the financing of institutions carries with it educational hazards because of the enormous financial dependence of institutions on the power to attract and retain students. In my judgment the present system of financing our colleges and universities may have been tolerable in an era of growth (though I think even then it was one-sided and lodged too much power in students), but it has great shortcomings for a period of decline. It contains no provision for cushioning the effects of adversity, no provision for achieving equity among different types of institutions, no provision for preserving diversity in the system. Much less does it have provision for making use of idle capacity should it occur.

It seems to me that the framework of a financial plan for higher education is becoming fairly clear. It would have three features.

First, it would include an effort by each institution to achieve as great financial and educational strength as it could muster to surmount whatever adversity may lie ahead. The strength of institutions shows not merely in their financial statements but also in the public confidence they enjoy, in their power to raise money, in the excellence of their programs, in their capacity to attract

students, and in their ability to manage adversity. These are the important assets — though financial reserves are not all bad.

Second, a financial plan would include an effort among educators, individually and collectively, to point out to the public the opportunities and challenges — as well as the dangers — of the coming decade. I think educators should not lie down and die like the unfortunate people of Jonestown, but should assert themselves by making clear to the nation the kind of program for higher education that would be in the public interest. Such a program would, I think, envision putting to use all or most of whatever unused capacity actually materializes. It would include continuing expansion of adult learning, possible entry into some aspects of secondary education, and expansion of research and public service, and improvement of quality and accountability.

Third, the financial implications are clear. These objectives call for the extension of student aid to new categories of students, the creation of new programs of categorical grants, and general institutional grants.

A worrisome aspect of the situation is that the impact of enrollment changes will vary greatly among institutions of different types. Some will face catastrophic declines in enrollment; others will scarcely notice a ripple. In general, I do not favor bailout efforts to "save" particular institutions; I would prefer that a general environment be achieved within which institutions of all types will have a reasonable chance of surviving — and then let the chips fall where they may. Frankly, I do not see my way through the handling of the differential impacts of demographic and other changes. I suspect that is the subject of another or perhaps many papers. But my main conclusion is that unused capacity in the higher educational system need not be regarded as a disaster. Rather it can and should be viewed as an opportunity, and higher educational planning should be directed toward utilizing whatever excess capacity materializes to carry forward the long-run objective of widening and deepening learning in our society.



## CHAPTER IV

### THE STATE BUDGET PROCESS: ROLES AND RESPONSIBILITIES

*Lyman A. Glenny*

Several dilemmas in the financing of colleges and universities face governments and higher education in the last two decades of the 20th century. The problems and issues arise as we examine the conditions facing the institutions of higher learning. We are familiar with most of them because we are of higher education—supported by it, nurtured intellectually by it, entertained by it, committed to its survival and even, at times, to its improvement. Some newly known factors impinge and reinforce several growing trends.

This paper includes first, a brief review of the trends portending a worsening condition for enrollment. Second, there is an examination of some less obvious factors which bring higher education to an enigmatic situation in its relationship with government and with government financing. Third, it ends with a statement on the impact of the new conditions on the quality of education.

#### **Current Demographic Trends**

The potential for drastically falling enrollments for the whole system (up to 25 percent on a national average, and quite probably affecting the state college and the denominational private college far more severely than other institutions) seems generally accepted save by the most optimistic of our brethren.

The traditional college age youth 18 to 21 years constitutes 75 percent of undergraduate enrollment. The number available for entry into college through 1995 are already born. They live now. One can speculate about the proportion of them who will finish high school with skills and knowledge sufficient to enter and complete college or the proportion which will actually be motivated to attend a college at all, but the number of young people only can be decreased, not increased. If so, enrollments in most institutions in most of the states will drop rapidly during the next 15 years and then level off for two or three years. We don't know what will happen after that for those children are not yet born. That number rests with the fads and whims of the present population, more particularly of the women of childbearing age, 14 to 44. Every year for the past



ten the Bureau of the Census has projected a sharp increase in births as the "baby boom" women reach maturity. The women so far have thought and acted otherwise. Only in the past three years has the drop in live births leveled off and made a small percentage increase—those are the 18-year-olds of 1995 to 1997. That period is a long way off in the consideration of current relationships of higher education to government for financing purposes. The length of time between now and then, during an almost continuous enrollment drop, increases the likelihood that government will take a less generous attitude toward colleges and universities than if the period were merely temporary.

Everyone in higher education must by this time recognize the second trend. It concerns the oversupply of college graduates at all levels and in almost every program area. The society will no doubt, as Howard Bowen and Clark Kerr consistently assert, be far better off for the rising level of education. The graduates, however, continue to hold to the proposition that each deserves a job which not only fully challenges their skills, talents, and knowledge, but also pays the traditional salary in comparison to persons not having the college experience. They also continue to be disappointed. The convergence of income of the less educated with the most educated continues. And it is the most educated who, relatively speaking, lose the most. This result in society certainly places a damper on the enthusiasm of some young people to attend college. What will they do in the future? The answer rests on a critical predictive assumption for assessing their future.

So far, that lack of motivation to attend college shows itself in the college going rates of the young. Forty percent of the men in the age group 18 to 21 had attended college in 1970 but only 34 percent in 1977 . . . a drop of a full six percentage points. Women made up part of this drop as they continue to enter college at a slowly increasing rate, up from 34½ percent in 1970 to 36 percent in 1977. The drop in rates for men seems almost bound to level off now and so will that of the women when they reach a certain saturation level. Will the college going rate rise on the average, remain about the same, or continue to go down as it has since 1968? Another critical assumption in looking to the future must be made on this point.

Two other factors concerning enrollment (neither of which seems carefully evaluated by the optimistic projectors of college enrollments) are those relating to minorities and to adults.

A 1977 Bureau of the Census statement leads into the minority enigma: "The number of Blacks 18 to 24 years of age has increased (between 1970 and 1977) at almost twice the rate of Whites in that age group." Tie that fact to the Bureau's estimate that the Spanish origin population will, before the late 1990's, exceed that of the Blacks, and further consider that in 1977 there were only about 11.2 million persons of Spanish origin and 25 million Blacks. As far as college going is concerned, proportionately both these populations are increasing

at a far greater rate than white students. This fact, in itself, may not be of much consequence. So what, one may ask. But here some little known or little recognized facts come into the picture. The average age of the white population is 30, of the Black 24, and of Spanish origin people 22. Whereas between 1970 and 1977 about 83 percent of the whites graduated from high school, only 66 percent of the Blacks and 55 percent of persons of Spanish origin did so. An early 1970's OECD study showed that 75% of enrollment variance can be explained by the numbers graduating from secondary school. Most of us also know that the vast majority of the minority young people who do graduate from high school come from the big city ghettos, often graduating with far less reading, writing and mathematical skills than necessary to enter or succeed in college. In large part the community colleges now absorb the minority populations and given the condition of minority basic education those populations will continue in community colleges even as the minority proportion of the total number of young people rapidly increases. Unless four-year colleges and universities reverse their current attempts to raise entrance and skill standards they will be eligible to enroll a smaller and smaller proportion of the rapidly diminishing number of 18- to 24-year-olds. What assumption can be made on this point?

Another factor not carefully assessed in viewing future enrollments and closely related to government financing is the proportion of the adult population which will attend college and enroll in those courses and programs for which the government provides regular student support. Little known or recognized is the fact that the number of men in the 25- to 34-year-old category, that which provides most of the adults in college, has leveled off for the past three years. On the other hand, the number of women continues to increase so that in the one year 1976 to 1977 about 400,000 new entrants into postsecondary education occurred, but as the Bureau of the Census states, "... the number of women increased significantly while the number of men did not." However, the rate at which women have entered college in the past ten years will not continue indefinitely. The saturation point already seems to have been reached for both young and adult men in college. The women's market will surely reach such a level in the near future. What assumptions do we make about increased adult enrollment in college, especially when only about five percent of all adults in school are in colleges for degree credit?

A last point on the college populations. The percentage of women entering the freshman class of 1978 for the first time exceeded the percentage of men. In four years, the majority of all undergraduates may well be women. Women tend to enter different programs, take different courses than do men. The resulting distribution has and will continue to call for substantial reallocations of resources among programs within colleges. What assumptions should be made about this new female majority in undergraduate education? Will costs increase or will they decrease? Will governments be more willing or less willing to support programs which women enter as opposed to men?

Prior to a discussion of the financial outlook for colleges and universities, a summary of the above points is in order. 1) The college age group 18 to 21 years will drop about 25 percent between now and 1993 and will then gradually rise for three years; 2) The oversupply of college graduates in most disciplines and programs continues to locate the average graduate in lower paid occupations requiring lesser skills than the graduate possesses; 3) Salaries of the less educated and the most educated are converging at a moderate rate; 4) The college going rate of men has dropped and appears to have leveled off; 5) The college going rate of women has steadily increased until the proportion of women entering college exceeds that of men; 6) The minorities, Black and Spanish origin, are a rapidly increasing proportion of the college age group, with the Spanish origin to exceed the Black population before 2000; 7) Whites graduate from high school at far higher rates than do Blacks who in turn exceed the rate of the young of Spanish origin; 8) About five percent of all adults in postsecondary education enroll for credit in colleges and universities.

Each of these trends carries with it high potential for changing the budget requirements of individual institutions of higher education and will undoubtedly do so. Prior to consideration of funding implications a brief examination of the state political and official agencies for budgeting appears in order.

### **Current Political Roles**

State governors, as do all chief executives during times of stress and crisis, continue to increase their control over state activities including higher education. With the general population somewhat indifferent to the fortunes of colleges and universities because they see the oversupply of graduates, the high costs, and the converging of incomes of graduates with the less educated, the governors give higher education moderate to low priority. Education reached its only apex of political salience (since the Morrill Acts in the 1860's) in the 1960's with both governors and legislators approving largess far greater than ever before. Governors now, with little political concern, ignore the higher institutions or use them for publicity as whipping boys in the budget process and give them what remains after funding other social functions of government. In many states the higher education budget is the largest single user of state discretionary income and consequently is subject to increases and decreases in state appropriations having little relationship to enrollments of that year.

The governor's budget office remains the most powerful of all staff agencies in most states. The executive budget largely determines the amount of appropriations for more state agencies than does the whole of the legislature — in all but a few states. That budget office speaks for the governor, it supports a function or reduces it according to gubernatorial goals . . . or whims as some bitter losers say. The increasing capacity of the executive budget office to conduct independent studies, to analyze policy, to review programs reflected in

the budgets, and to reach policy objectives through budget manipulations, places in jeopardy the competitive desire of state legislatures to equalize power with the governors. It also leaves higher education largely at the mercy of the governors and their staffs.

Legislatures, although striving for more power in relation to the governor, remain confused about their role, even more confused than in the past fifty years as the governors accumulated power through authority over appointments, the veto, and the state budget. Legislators still want to regain sufficient power to make policy on equal terms with the governor.

In pursuit of this objective, to return to their status and power of 1900, legislatures resort to one of the schemes which undergirds the governor's position—strong professional staffs to aid them in data gathering, analyses, weighing alternatives and making professional judgments. Staffs increase to the point that few legislatures are without at least one strong central analytic staff, and most have staffed appropriations committees and some even the more important substantive committees. Of significance to higher education are the growing number of program audit agencies, staffed with young research professionals who with their recent college educations see higher education as prime for a social program to review. Usually conducted in depth and over broad areas, the reviews have potential for improving or changing program operations while concurrently affecting state financial support.

The legislative staffs, generally entirely new bureaucracies supporting the legislature, nevertheless cannot overcome the great fragmentation of purpose and goals of the legislature by any amount of excellent staff work. First, the staffs in general do not match the quality of those of the governor nor those of the state coordinating board for higher education, and secondly they seldom achieve the degree of coordination among them that would provide the legislature with a single set of alternatives to gubernatorial policy or to the governor's budget priorities. Staff fragmentation reflects the diversified and often unreconcilable differences in values and goals of the legislators and their committees. The disarray in agreement on values portrays the equal disarray of the society itself. More and more the legislature tends to be composed of persons representing very particular interests with specific objectives in mind. They compromise with great difficulty, as if it were abhorrent to the democratic process, rather giving way on their special interests only under internal political duress, a state difficult to achieve. This fragmentation of the legislature, though not new, is being considerably aggravated. It results in the lack of clear political party objectives as well as capricious legislation, that is, legislation not carefully considered for its impact on the society save for the special interest it promotes or protects. More often now statutes appear which, in the name of accountability, intervene in college and university affairs in ways not previously countenanced by thoughtfully developed party positions on an issue. For example, the Nebraska legislature took from its higher education agency the program review function

and itself assumed the role through a legislative committee and staff. The Nebraska courts meantime held that the legislature could not intervene in certain management affairs of higher institutions but even the college administrators knew that control remained with the legislature—through the budget. The Washington legislature has ordered the coordinating council to investigate the curricular programs of one of the state colleges to determine what changes ought to be made—an intervention which at one time would have aroused the University of Washington and the AAUP to heights of wrath in the name of autonomy and academic freedom but which has so far elicited not a peep from any higher education leader save from the investigated institution and those investigating. The University of California for the first time in its long constitutional history, unlike the University of Michigan, is challenging in court general state government statutes which would require the University on individual request to open its pertinent personnel, promotion and status records to faculty members. Such great divergences from past custom illustrates legislative contemptuousness of traditional values and mores—and is further illustrated in manipulation of budget items and amounts to achieve its objectives.

State coordinating agencies, the statutory creatures of the legislature and governor, get squeezed in the political struggle and also must act for both as a hatchet agency. Even coordinating staffs, though of better quality than those in the legislature and equal to those of the governor, may at times out of the frustration of administering budgeting cuts and program reductions, become more arbitrary than in the past.

In the governor/legislative competition governors have steadily drawn the coordinating agency into their camp and left the legislature with little faith in agency data or recommendations. With both political arms having a clear capacity to review in detail the increasingly programmed budgets, the coordinating agency becomes the data gathering errand boy rather than the policy recommending body that would provide it with an independent stature and role.

The boards' relationship with the colleges and universities also degenerates as the monies for academic and building "goodies" diminishes, leaving the agency with the task of administering legislative interventions and the governor's budget cuts. It ostensibly remains as the buffer between institutions and governor but unless it plays a much stronger and decisive role in making long-range policy alternatives known to the political bodies, the boards seem destined either to become fronts for the institutions in seeking funds, a very dangerous role considering the boards' vulnerability to elimination, or to drift into the governor's camp to do sharpshooting on the institutions. As enrollments in the 1980's drop for the state colleges and quite probably for the community colleges as well, the big state research universities with prestige and student drawing power will be relatively more powerful than at any time since the 1950's.



Any coalition of interests between the research university and either the governor's budget staff (which seems rather unlikely given the grasping nature of the prestigious), or of one of the powerful legislature staffs and their political leaders could spell an end to effective coordination of the university, and could result in the demise of the coordinating board as an entity. Dollars eventually do follow the student numbers just as they did in the 1960's during the growth period when coordinating agencies began to equalize support for state colleges and junior colleges with the university for the same courses and programs. Now the reverse situation will negatively affect the other two institutional types and the universities will become again the dominating power in the higher education realm.

Coordinating agencies thus find themselves in a precarious position at best, captive of the governor, heretical to the legislature, and unloved by the institutions. Their role, dominated in the past by budgeting, must emphasize policy analysis and policy recommendations on the very broad array of funding issues which will confront higher education both public and private. "Swift gradualism" should make the shift possible—providing the leadership and staff capability to support it can be implaced.

### **Financial Dimensions**

The leadership of higher education, among the associations and from the colleges big and small, research or teaching, public or private, has looked with quintessential longing for the federal government to throw its full largess in the way of all higher education as it did for the hard sciences after Sputnik. We even proposed making fifty or a hundred research universities into nationally supported ones, of a civilian GI bill that would pay the full cost of most students in virtually all institutions except the most expensive, and of getting the federal government to support the surplus German student population in our empty spaces (a shift now to the Chinese instead of Germans). These and other fanciful dreams about the role of the feds in funding higher education should certainly be put to rest. The National Center for Educational Statistics reports that by 1976 the federal proportion of the total higher education budget for the nation had dropped in seven years from 19 to 15 percent of the total. The decision to fund students instead of institutions in the late 1960's led to greatly diminished support and a policy of allowing the number of inflated dollars to remain the same for higher education functions. Since 1976, the proportion of federal dollars in all higher education has further decreased.

Moreover, the federal government, creating the current inflationary spiral by its vastly increased deficit spending, is in no position to increase funding for colleges even at the 1976 level and will not do so in the foreseeable future. It is currently embarked on a course of action leading to depression in order to control inflation. And now also some people want to put a spending ceiling on the federal government.



The states, in the meantime, picked up the tab left so blatantly by the federal government and has continued to fund each FTE student at the same constant dollar rate as in 1969. Janet Ruyle reports that fact in her state revenue and appropriations survey and also shows how deceptive that statement is based upon regional differences. The South and East have not kept up in constant dollars while the West has moderately increased real support. The Midwest, which cut back considerably in the late '60s, increased dollars per FTE more than 15 percentage points since 1969. Ruyle further reports that appropriations often bear little relationship to enrollment growth. Dollars may go up as enrollment goes down or vice versa. Twenty six of the 45 states reporting, showed growth of constant dollars, while 19 decreased and two remained the same. Overall, however, the states did a remarkable job in maintaining support for higher education in the face of extraordinary demands for funds by new services, by the withdrawing of federal funds and by the sharply increased costs of health programs.

While this past ten-year picture reveals strong state support for higher education, states may in the future have to spread income over many more activities and increase it for existing ones. The taxpayers' revolt primarily grew out of the abuses of the property tax by local governments and has spread to state levels on taxes or spending levels in general. No state in the nation, according to the Wall Street Journal after an analysis of the statutes which passed in November 1978, will suffer the impact of tax cutting more than California with its Proposition 13. (Well numbered indeed!) Sixteen states considered and eight have now passed some kind of tax or spending relief measure—with what consequences for higher education?

The record so far shows that local governments become the most strapped for funds because they offer some critical services such as fire and police protection which get the first dollars, followed by the public schools and then child care and myriad other services designed to help the poor and aged. The community colleges in California were, in some cases, bailed out completely by the state in 1978 but in others, because of the formula used, fell far short of providing the dollars to make up for local property tax losses. In 1979, all community colleges may need to cut budgets if the state earns a less bounteous surplus for redistribution. The governor is also ostensibly applying a 10 per cent cut on all state spending, including each of the three higher education systems. What seems destined with the taxpayers' revolt is that state funding must cover a greater proportion of local services than in the past. It will be unable to increase state taxes for these purposes and may even have to reduce them. All existing state services, including higher education, will bear the brunt of "dollar doling." Higher education will receive fewer dollars per FTE student and a reduced proportion of total state income.

It appears unlikely that the tax and spending cut phenomena will be of shorter duration than five years and perhaps as long as ten or more for higher

education, for it is in 1990 to 1993 that the sharpest drop in enrollment will likely occur between now and then. In some states the births from 1970 to 1973 which produced the enrollments for that three-year period dropped as much as 25 percent. That is, one-quarter in just three years. For the nation as a whole the drop was 17%. After that for at least another three or four years the numbers of potential students will increase slowly. And after that we do not know . . . only greater production of babies after today will make for an increase.

### **An Addendum of Despair and Hope**

The picture I draw here is for hard times for many higher education institutions. I believe that to be a fairly accurate summation for the next fifteen years. But other elements may change the picture in that fifteen-year period both for worse and for better. First the worst.

One factor receiving little publicity but which could bear heavily on college enrollment is the manpower needs of the armed forces. As the number of young people declines during the '80s the proportion of them in the military will rise, reducing the proportion available for college entrance. Too, the military complains that its forces are too thinly scattered now and that manpower is at its lowest ebb since WWII. They require increases of persons who have greater capacity to operate and repair the sophisticated weaponry and their strategic use than currently available to the services. If they should reinstate the draft, which at the moment seems unlikely, or if they should draw off higher level talent the colleges would be affected. They could be affected negatively or positively depending on military policy. Colleges could be called upon to educate and train the manpower required or, on the other hand, the services could expand an already effective capacity for doing it themselves, just as industry has continued to do.

On the positive side, with some certainty are a number of factors. First, some of the states having large in-migrations will have no loss of 18- to 21-year-olds or those adults who make up college goers. Probably six or even ten states may fall in this category. Of course, that migration pattern favoring some states will have a still more detrimental effect on the states losing the population. Usually people in their twenties and early thirties are the out-migrants.

Very much on the positive side is that by 1985 fewer graduates will be coming out of higher education. It will take a number of years for real shortages of young new fresh graduates with the most recent knowledge and skills to appear, but by the 1990's the labor shortage will become real for undergraduates and begin to be felt for graduate level people. The impending shortage will be a matter of much public concern. Young people will begin to plan their careers in job areas of greatest shortage. It appears likely that the college going rate for young men will turn around and for women resume its upward trend.

Also because of the labor supply and the need for colleges and universities to furnish the most educated part of it, the public will once again believe in the worth of a college education. Support may follow that belief, certainly dollars will follow students into the schools in order that each person can become more productive than his predecessors.

These hopeful factors can occur soon as far as the military is concerned but are at least eight to ten years away for the impending labor shortage. Hence, in the meantime the roles of the agencies which budget and control most of higher education will become fuzzier rather than clearer unless some extraordinary about-face occurs in the leadership and the direction of state coordinating agencies and of higher education. The contest between the governor and legislature will continue as it has in the recent past with governors maintaining their control in the face of an ever more value and goal fragmented legislature. Students will be well off. The quality of their education will improve for the weakest programs and inadequate faculty members will be eliminated in the process of resource reduction and reallocation.

### SELECTED REFERENCES

1. Carnegie Foundation for the Advancement of Teaching, *More Than Survival*. Jossey-Bass Publishers, San Francisco, 1975.
2. National Center for Education Statistics, *The Condition of Education*, Statistical Report, 1978 Edition, Mary A. Golladay and Jay Noell, editors. U.S. Government Printing Office, 1978.
3. New England Board of Higher Education, *Higher Education in New England*, Vol. 14, No. 3, Spring 1974.
4. Ruyle, Janet and Lyman Glenny, *State Budgeting for Higher Education: Trends in State Revenue Appropriations from 1968 to 1977*. Center for Studies in Higher Education, University of California, Berkeley, 1979. In press.
5. U.S. Bureau of the Census, *Current Population Reports*  
Series P-20, No. 325, September 1978  
P-20, No. 330, September 1978  
P-20, No. 329, September 1978  
P-20, No. 324, April 1978  
P-20, No. 319, February 1978  
P-20, No. 278, February 1975

Series P-25, No. 476, February 1972

P-25, No. 721, April 1978

P-25, No. 601, October 1975

Series P-23, No. 70, July 1978.

6. U.S. Public Health Service, National Center for Health Statistics,  
*Vital Statistics Report*

Vol. 25, No. 10, December 1976

Vol. 26, No. 12, March 1978

Vol. 27, No. 5, August 1978.

## CHAPTER V

### BUDGETING APPROACHES IN THE 1980s: LOOKING FOR MR. GOODBAR

*Anthony W. Morgan*

One of the most heady yet dangerous pleasures of academic life is to venture a prediction of what the future will bring. It is heady in that one can appear to be authoritative; yet dangerous in that as time unfolds everyone can judge for themselves the accuracy. In an after-dinner speech made in September 1956 by the late, distinguished chairman of RCA, David Sarnoff ventured to predict "20 major developments likely to affect all of us in the next 20 years." As evidence of the dangers of such postprandial pleasures, Sarnoff predicted the following: nuclear energy widely used to power industry, ships, trains, autos; mail delivered by guided missiles; effective solar energy; a "crescendo" of automation through "cheap and abundant power"; a generally well-fed world; accurate year-ahead weather reports; and others.<sup>1</sup>

A humbling sequel in this game of seership in the reported results of predictions was made by the Eggert Road Elementary School (Buffalo, New York) class of 1953. Asked twenty-five years ago to write essays predicting conditions in 1978, student predictions included the following: "I think the world will have very high prices in 1978... Trains will not be used very much. ...Some men may even walk on the moon. ...Supersonic airplanes will fly across the Atlantic in 3 hours." One prediction wide of the mark, however, was "warmer winters in Buffalo."<sup>2</sup>

Three common alternative scenarios describe what planning and budgeting in the public sector might be like in the 1980s.

The first is that of *advancing technology*, coupled with the application of microeconomic theories to institutions of higher education. This scenario envisions a world of better data, sophisticated and refined analytic models, and management trained in the proper use of such models. A second scenario, which might be labeled *systematic thinking*, is the beneficiary of a "back to basics"

<sup>1</sup>"The Future That Never Came," *Forbes*, July 10, 1978, pp. 51-52.

<sup>2</sup>*International Herald Tribune*, November 11-12, 1978.

movement in the policy sciences in the late 1970s. This movement succeeded in redirecting a substantial portion of research and development monies toward analyzing how individuals think and what information they use in making decisions. The result emerging under this scenario is the implementation of fundamentally different ways of thinking and decision making. The third scenario envisions a fundamental shift in who makes resource allocation decisions. This *virtues of the market* scenario foresees the effects of an almost full-blown market system introducing newly articulated criteria of efficiency. Allocation decisions will be made in large part through student fees and federal research grants.

These three scenarios, virtually undeveloped here in their capsule form, reflect the major intellectual traditions or paradigms which currently influence our analysis of problems in the public sector.<sup>3</sup> The first scenario, that of "advancing technology," parallels what Richard Nelson has called "the traditional perspective of public policy analysis" wherein high level decision makers improve the basis upon which they make decisions. The second scenario, "systematic thinking," follows what Nelson calls the "role of knowledge and technology" tradition, wherein research and increased intellectual activity produce major breakthroughs. The third scenario, "virtues of the market," follows the inclinations of many economists who see the basic variable as the "organization and control of economic activity"—hence the call for an overhaul of institutional structure by creating more efficient expressions of demand and supply.

Each scenario has, of course, its own problems. Rather than attempt to review the problems of each in this paper, I have instead focused on selected issues which cut across more than one of the scenarios. In doing so I have slighted the third scenario, partially because I believe that the 1980s will see only partial market mechanisms at work. Ascribing the benefits of a full market system would therefore, in my opinion, be unwarranted.

### Assumptions

Most projections for the higher education sector characterize the decade of the 1980s as one of enrollment decline with associated fiscal instability. While there is substantial disagreement among those projecting enrollments, the probability of budgetary decline in real dollars (adjusted for inflation) is high, given the apparent permanent inflationary pressures that render terms such as "steady-state" or "stability" illusory.<sup>4</sup> Playing yet losing at the game of

<sup>3</sup>See Richard R. Nelson, *The Moon and the Ghetto: An Essay on Public Policy Analysis*, New York: W.W. Norton, 1977.

<sup>4</sup>Juanita M. Kreps, "Higher Education in a Low-Growth, High-Inflation Economy," in John F. Hughes and Olive Mills (eds.) *Formulating Policy in Postsecondary Education*, Washington, D.C.: American Council on Education, 1975, pp. 58-67.



inflationary catch-up, institutions are likely to encounter a continuing erosion of their funding base without necessarily incurring dramatic funding cuts.

For purposes of this paper, it is therefore assumed that nationally higher education will be in a period of slight enrollment and real dollar budget decline during the 1980s. This condition could, of course, be dramatically accentuated by federal or state tax limitation measures or by serious attempts at the federal level to balance the budget. Federal budget balancing would probably occur at the expense of discretionary programs—grant programs—which could have an important impact on higher educational institutions in two ways: (1) Cuts in "pass through" federal funds designated for state and local programs would only increase pressures on state legislatures to assume the burden and thereby increase competition for state funds; and (2) cuts are likely to occur in discretionary funds directly related to higher education, e.g., research grants, institutional aid programs, and student aid programs.

Based upon this assumption of a slight decline in real financial resources coming to higher education in the 1980s, the paper focuses on three general issues as follows:

- (1) the push for a goal-centered planning model as a basis for budgetary decisions;
- (2) the role of expectations and incentives in shaping institutional responses to diminishing resources; and
- (3) key strategic decisions and tactical alternatives for budgeting in the 1980s.

A principal thesis of this paper is that basic unresolved theoretical questions as to the most appropriate planning and budgeting model for college and universities will severely limit the utility of most planning and budgeting proposals currently touted.

The paper obviously omits many issues pertinent to budgeting for higher education in the 1980s, e.g., financing of the private sector, the funding of adult education, etc. The focus here is on issues associated with the basis upon which one makes budgetary decisions and with individual and organizational constraints likely to affect resource allocation strategies in the 1980s.

### **Planning Under Conditions of Decline**

*The Costs of Consensus.* Many social theorists have pointed to value or goal consensus in democracies such as ours as the emulsifier which stabilizes such

societies and permits them to handle internal conflict.<sup>5</sup> Consensus over values, however, may be more apparent than real. That is, most values and socially cohesive beliefs mentioned as bases of consensus are at a high level of generality. If value questions are stated more precisely and specifically, the level of disagreement or conflict rises. Nowhere is this phenomenon more evident than in the legislative process (e.g., Title IX) where general values are extolled and agreed upon. When specific policy guidelines are enacted by executive agencies, however, considerable disagreement arises.

In planning for various federal or state programs, consensus is achieved at a fairly high level of generality—incorporating various competing special interests under broadly construed and often conflicting language. When resources are allocated both among and within such programmatic plans, consensus and congeniality are sustained if (1) there are sufficient funds to provide each contender a piece of his program, thereby sustaining hopes for eventual fulfillment; and (2) some notion of "fair shares" prevails. Consensus is therefore achieved at a price presumably worth the benefits. In an interesting empirical study of consensus and performance in private sector companies, however, Grinyer and Norburn found no evidence that consensus over objectives or formal planning correlated positively with financial performance across 21 companies. Parenthetically, their study did find that financial performance correlated positively with reliance on informal communication and with diversity of information used to assess company performance.<sup>6</sup>

In organizations such as universities, consensus over basic goals or directions is most often achieved at a nonoperational level by broadly worded mission statements and at an operational level through accommodating the various conflicting subgoals held by influential groups or coalitions within the organization. Resolution of differences among these subgoals is accomplished through what Cyert and March term "side payments" or policy commitments to each of these groups. Organizational consensus is therefore achieved if the side payments made to the various influential coalitions are adequate to keep them in the organization. If sufficient side payments are not forthcoming, an organization such as a university may well lose an individual or group of faculty stars who are quite mobile even in financially tight times.

The ability of an organization to make such side payments is referred to as "organizational slack" and is, according to Cyert and March, functional in both good times and bad times. By absorbing excess resources, slack retards upward adjustment of aspirations during relatively good times; by providing a pool of

<sup>5</sup> See for example, Gabriel Almond and Sidney Verba, *The Civic Culture*, Boston: Little, Brown & Co., 1965; also Robert A. Dahl, *Ruralist Democracy in the United States: Conflict and Consent*, Rand McNally, 1967.

<sup>6</sup> Peter H. Grinyer and David Norburn, "Planning for Existing Markets: Perceptions of Executives and Financial Performance," *Journal of the Royal Statistical Society, Series A*, 138: 70-97.

emergency resources, it permits aspirations to be maintained and possibly achieved during relatively bad times.<sup>7</sup>

But as slack resources are drained to absorb initial budget cuts, the ability of institutional administrators to meet existing as well as prospective side payments diminishes. Choices must be made among influential groups within the institution, and administrators must be prepared to lose both selected individuals and the comfort of a climate of consensus. Planning begins to require more explicit and delicate choices—a situation most people want to avoid.

In a study of 42 institutions of higher education, Cohen and March looked at the effects of financial adversity on decision making in four types of institutions: (1) large, rich universities; (2) large, poor universities; (3) small, rich colleges; and (4) small, poor colleges. They found that both overt conflict and time required to arrive at decisions increased precipitously during the early stage of "bad times"—especially at large, rich universities. Their model predicts that all types of institutions, and particularly rich schools, will experience a reduction in conflict and time required for decisions as bad times persist.<sup>8</sup>

Many of us look to planning as a logical basis for budgeting on the downside. Lyman Glenny, one who has consistently called for high quality planning at both state and institutional levels, advocates an aggressive planning stance in order to preserve some measure of institutional and system autonomy.<sup>9</sup> It does indeed seem reasonable to assume increasing interest and activity in planning. Equally reasonable is the supposition that such planning will in the 1980s, for the reasons discussed above, be characterized by a lesser degree of consensus. Win-lose situations, with their attendant strategies of self-preservation, will increasingly supplant win-win situations, despite wishes of organizational developmentists to the contrary.<sup>10</sup>

*The Goal Model as a Basis for Planning.* Most of us have been imbued, both through our occidental cultural background and by our academic training, with the notion that decisions *should* be made in the following manner: (1) select a goal(s); (2) array and assess the alternative means of achieving the goal; and (3) select the most cost-beneficial alternative based on currently available

<sup>7</sup>Richard M. Cyert and James G. March, *A Behavioral Theory of the Firm*, Englewood Cliffs, N.J.: Prentice-Hall, 1963, see chapters 3-5.

<sup>8</sup>Michael D. Cohen and James G. March, *Leadership and Ambiguity*, New York: McGraw-Hill, 1974, pp. 88-90.

<sup>9</sup>See for example, "Coordination and Planning Despite Competition and Confusion," in Allan M. Cartter, ed., *Assuring Academic Progress Without Growth*, New Directions for Institutional Research number 6, summer 1975, San Francisco: Jossey-Bass.

<sup>10</sup>For a very useful summary of research in conflict, see Morton Deutsch, *The Resolution of Conflict: Constructive and Destructive Processes*, New Haven: Yale University Press, 1973.

information. Prevailing organizational decision theory asserts that nonprofit, like profit organizations, are designed to achieve certain goals. The planning and management model in both cases is, therefore, to specify the goals, refine our ability to analyze alternative courses of action, and establish parallel performance measures. In its ultimate form, this goal model resembles a very complete platonic logic system, wherein goals are precisely defined and ordered. Performance can then presumably be measured and budgetary policy choices made on the basis of either actual or probable goal achievement.<sup>11</sup>

Citing this liturgy, Richard Cyert concludes:

The lack of a systematic basis for resource allocation results from the absence of a well-specified set of goals for the organization. Without a clear understanding within the organization of a set of goals and the set of priorities designed to implement those goals, there will always be ambiguity and arbitrariness in the resource allocation process.<sup>12</sup>

This normative model of choice is so ingrained in our minds that to reject it is to reject rationality and intelligence, leaving only a sense of nihilism. Indeed, as Cohen and March point out, this model of choice imposes such culturally embedded ideas as (1) preexistence of purpose; (2) necessity of consistency; and (3) primacy of rationality.<sup>13</sup>

A certain degree of strain arises when this particular model of choice is imposed on an organization that acts contrary to these three tenets. It is not, according to Cohen and March, just a case of the organization misbehaving; rather, it is in the nature of the organization and the environment in which the organization exists.

The American college or university is a prototype of this deviant case of organization—what Cohen and March call an “organized anarchy.” Organized anarchies are characterized by:

1. *Problematic goals.* It is difficult to impute a set of goals to the organization that satisfies the standard consistency requirements of theories of choice. The organization appears to operate on a variety of inconsistent and ill-defined preferences. It can be described better as a loose collection of changing ideas than a coherent structure. It discovers preference through action more often than it acts on the basis of

---

<sup>11</sup>For a critical analysis of this general approach, see David Braybrooke and Charles E. Lindblom, *A Strategy of Decision*, New York: The Free Press, 1963.

<sup>12</sup>Richard M. Cyert, *The Management of Nonprofit Organizations*, Lexington, Mass.: Lexington Books, 1975, p. 16.

<sup>13</sup>Cohen and March, *op. cit.*, pp. 216-219.

preferences.

2. *Unclear technology.* Although the organization manages to survive and (where relevant) produce, it does not understand its own processes. Instead, it operates on the basis of a simple set of trial-and-error procedures, the residue of learning from the accidents of past experiences, imitation, and the inventions born of necessity.
3. *Fluid participation.* The participants in the organization vary among themselves in the amount of time and effort they devote to the organization; individual participants vary from one time to another. As a result, standard theories of power and choice seem to be inadequate; and the boundaries of the organization appear to be uncertain and changing.<sup>14</sup>

Decision making in such organizational environments does not follow the lines of classical theories of choice, i.e., making choices in the context of clearly defined goals, explicit market mechanisms or even explicit bargaining. Cohen and March argue that we ought not to assume that goal definition necessarily comes first, followed by rational action. Rather, they postulate that, "Human choice behavior is at least as much a process of discovering goals as for acting on them."<sup>15</sup>

While defining goals and acting are conceptually distinct, they are in practice highly intertwined. March's arguments along this line are reminiscent of past debates over distinguishing ends from means and policy from administration. Ought we not, therefore, March argues, to think in terms of discovering rather than constructing goals? Or at least to consider goals as hypotheses to be evaluated post hoc?

These basic, yet penetrating questions posed by Cohen and March have important implications for budgeting in the 1980s. Most of us think of planning in the tradition March criticizes; and we would want to base budgetary allocations on this planning model. Budgeting in the 1980s, at least for many, therefore, awaits the refinement (or theoretical leap depending upon one's assessment of the situation) of the goal model applied to higher education. One danger of depending too heavily upon refinement of the goal model is to preclude serious attention to what appear to be less attractive alternatives.

Secondly, pursuit of the goal model may engender a dulling sense of frustration or increase the probability of a paralyzing backlash on the part of both those attempting to implement the model and those upon whom the exercise is being perpetuated. Goal setting exercises, for example, undertaken by groups tend to be both agonizing and time consuming. The consensus-generating

---

<sup>14</sup> *Ibid.*, p. 3.

<sup>15</sup> *Ibid.*, p. 220.

procedures followed generally result in a series of statements, sufficiently unclear and/or contradictory, which are far too subjective for purposes of conformity to the goal model.

This is not to say that a goal such as "academic excellence" is not worthwhile or useful. Such a goal is, however, highly subjective and in budgetary allocations, one subject's excellence is another's bias. Whether a goal such as excellence, quality, or creative thinking can be disaggregated and systematized into more objective, measurable statements and thereby function as operational criteria is a very basic question underlying the further development of "appropriate" management or administrative practices.

### Expectations and Incentives on the Down Side

*Changing Expectations* The expectations one holds for the outcome of a process, or indeed for the very nature of the process, substantially influence what in fact emerges and how. A recent empirical study for controlling and manipulating expectations as a variable demonstrates this point. Managers of four industrial plants were given artificial reports about the success of implementing job enlargement and job rotation programs. Led to expect higher productivity as a result of these organizational innovations, the managers increased their plant output during the experiment period.<sup>16</sup>

Under conditions of budgetary decline in higher education, what expectations will individuals in departments, colleges, institutions, and state levels hold? Historically, institutional level units have been characterized by their expectations for "prestige maximization."<sup>17</sup> Will such expectations continue despite decline or will new sets of expectations arise, survival?

One problem central to intelligent planning under conditions of steady state or decline is that of changing historical expectation patterns. Most faculty are marvelously insulated from the realities of budgetary pressures and trends and refuse to accept what appear to them as pessimistic and defeatist assumptions. I had the experience of taking a draft of our institution's goal and mission statement before a council of academic deans. The predominant change recommended was to reject what I considered very moderate assumptions of "limited growth."

Communication and acceptance of "realistic" assumptions is an issue

<sup>16</sup> Albert S. King, "Expectation Effects in Organizational Change," *Administrative Science Quarterly*, June 1974, pp. 220-230.

<sup>17</sup> David W. Breneman, "The PhD Production Process," in *Education as an Industry*, New York: National Bureau of Economic Research, 1976, pp. 3-52; also R. Charles Moyer and William J. Ketlow, "The Resource Allocation Decision in U.S. Colleges and Universities," *Higher Education* 7 (1978) pp. 35-46.



complicated by both political strategies and organizational roles. That is, it may well be impolitic or fatal to one's career to reveal a position of weakness too early in the game. In the absence of commonly held and realistic assumptions, however, how can a system or an institution engage in the type of hard-headed planning being advocated? Certainly one advantage of broad-scaled participation in resource allocation decisions, at least in the early stages of the decisions, is to act as a depressant and leveler of exaggerated expectations. What might a set of reasonable expectations be for the 1980s? Prestige maximization in more selective academic areas? What types of expectations and incentives are there for those areas not designated for development?

A final aspect of institutional and system expectations is the time dimension. Will financial stringency and decline be short-term or long-term? Bowen and Glenny's study of fiscal stringency and retrenchment in five states revealed the types of state level strategies employed under short-term expectations.<sup>18</sup> In assessing the experience of these five states, Bowen and Glenny call for a longer term perspective in assessing programmatic priorities.

*Incentives.* Budgeting under conditions of steady state or decline also presents special problems relative to incentives and organizational roles. Under conditions of budgetary growth, department chairpersons, deans, institutional presidents and system chancellors operate within an environment of predominantly positive incentives which reinforce their role as an advocate for their respective organization. Careers and reputations are built on providing rewards for dynamic new programmatic thrusts (as well as buildings). The advocate role is both comfortable and well understood within and outside the organization.

Absent the environment of growth, what happens to this normal complementary nature of roles and incentives? If a dean were to advocate budgetary and programmatic cutbacks, he may have the central administration, selected state budgetary officials, legislators and staff as his new "constituency" and may be rewarded by being made academic vice president or associate chancellor for academic affairs at the system level. He may indeed become one of a new breed of very mobile academic "hatchetpersons"—an equivalent to the type of reputation built by Alfred Kahn at the Civil Aeronautics Board. But what of the dean's traditional and close-to-home constituency—the college faculty? In institutions where deans rise from and return to the faculty ranks, they are obviously imbued with and responsive to faculty values and norms. A dramatic change in roles may produce a dramatic change in careers or at least a very uncomfortable retirement.

---

<sup>18</sup> Frank M. Bowen and Lyman A. Glenny, *State Budgeting for Higher Education: State Fiscal Stringency and Public Higher Education*, Berkeley: Center for Research and Development in Higher Education, University of California, 1976.

## Strategic and Tactical Responses to Budgetary Decline

Decline or steady state may occur for a variety of reasons, e.g., a diminishing enrollment pool, a decline in the attractiveness of a particular institution or of the value of a college degree in general, overall cuts in state resources due to tax limitation measures, etc. Strategic and tactical responses to budgetary decline will therefore depend to a significant degree upon the particular causes of decline.<sup>19</sup>

*A Basic Strategical Decision.* Certainly one of the most basic strategic issues is whether leadership at the state, system and institutional levels adopt expectations of decline. Public pronouncements to constituents aside, will each organizational level in higher education make contingency plans to accommodate decline? A rejection of such contingency planning may, as previously indicated, be adopted as a conscious strategy. To adopt this classical advocate position has its benefits—or at least is a ploy for maximum dollar benefits, i.e., you admit no weaknesses, attempt to maximize your share of the pie, and you will hopefully be viewed as the white horse champion by your constituents.

A strategy of pure advocacy, however, is not without its risks. If in fact slow or rapid resource decline occurs, budgetary cuts will by necessity be passed on without much forethought or rationale.<sup>20</sup>

A second general strategic issue is the role of leadership under conditions of decline. While studies of leadership are mixed in their assessment of the impact of leaders, several authors argue that leadership abilities play a more important role in crisis decision making than otherwise. Drawing upon studies in local governments under conditions of resource decline, Glassberg cites three types of mayoral leadership: (1) "the civic entrepreneur" or activist who is adept at accumulating a variety of resources and using them to pyramid and centralize power in an otherwise fragmented system; (2) "the broker" who is a master of building coalitions and defending his share of the pie; and (3) "the figurehead" who eschews any active role in favor of riding out the storm.<sup>21</sup>

The leadership styles and accompanying strategies which emerge in higher education in the 1980s will to a large degree depend upon whether "defending the base" strategies, as Wildavsky terms them, will continue to serve the

<sup>19</sup>See Charles H. Levine, "Organizational Decline and Cutback Management," *Public Administration Review*, July/Aug., 1978, pp. 316-324; also Cohen and March, *op. cit.*, chapter 6.

<sup>20</sup>See Frank Bowen and Lyman A. Glenny, *State Budgeting for Higher Education: State Fiscal Stringency and Public Higher Education*, Berkeley: University of California, Center for Research and Development in Higher Education, 1976.

<sup>21</sup>Andrew Glassberg, "Organizational Responses to Municipal Budget Decreases," *Public Administration Review*, July/August, 1978, pp. 325-332.

interests and enhance the reputations of organizational leaders. If such strategies are perceived to be detrimental to leadership careers, then perhaps we will see individuals more willing to adopt what Dahl and Lindblom termed a "calculated risks" strategy, i.e., nonincrementally entail consequences no worse than those of existing reality.<sup>22</sup>

Prior to any tactical responses to budgetary decline, it seems important therefore for leaders at institutional, system and state levels to sort out the probable causes of decline and to assess alternative strategic responses. Once such assessments have been made, it seems more reasonable to discuss tactics.

*Tactical Lessons from the Private Sector.* Glassberg identifies two principal private sector tactics in responding to conditions of declining resources: (1) "cut-the-fat"; and (2) "revitalizing" the enterprise. The former attempts to secure organizational survival by drastically paring overhead and holding down labor costs. The latter concentrates on redirecting the organization into narrower or redefined activities in hopes of reestablishing an equilibrium. The two tactics are obviously not mutually exclusive and one could argue that time is the distinguishing variable. That is, given little response time and/or short-term expectations of declining resources, "cut-the-fat" represents the most feasible and logical response. Programmatic reshuffling and pruning, on the other hand, will only occur as a result of widespread expectations of more permanent decline.

In addition, public colleges and universities may be substantially restricted in the extent to which they may adopt a "revitalize the enterprise" tactic. Wholesale programmatic cuts or shifts, which would run into well known tenure obstacles, may also be restricted by external constraints such as accreditation or legislative mandate to maintain broad programmatic coverage.

*Across the Board vs. Selective Cuts.* These two private sector models exemplify the very basic tactical trade-off between a "meat-axe" or "across-the-board" approach vs. a "selective cut" approach.

Selective or across-the-board tactics place differing kinds of burdens on those faced with making decisions.<sup>23</sup> At the state level, for example, a decision to institute essentially across-the-board cuts in traditional "fair-share" style may well call into question the *raison d'être* of the statewide agency. That is, why does the state have a statewide higher education agency if it merely passes along proportional cuts to institutions—an administrative feat that might be as easily

<sup>22</sup>Robert A. Dahl and Charles E. Lindblom, *Politics, Economics, and Welfare*, New York: Harper Torchbooks, 1953, pp. 85,86.

<sup>23</sup>One study of budgetary cuts in higher education described the difficulty of making selective cuts at state and multi-campus system levels. Anthony W. Morgan, "Flexibility for Whom: The Case of Forced Savings in Budgeting for Higher Education," *Educational Record*, vol. 56, no. 1, 1975, pp. 42-47.

and more economically performed by the legislature or an executive branch department. The statewide agency may therefore risk its future by not making selective cuts, even though a careful review of the matter may conclude across-the-board cuts to be the best policy.

Adoption of a policy of selective cuts, on the other hand, shifts the burden of proof to those who are proposing to terminate programs, services or institutions. To assume this burden of proof is to assume an uncomfortable position, both in a political and analytical sense. Analytically, the underlying presumption in making selective cuts, via zero-base budgeting, performance auditing or any other label, is that the procedure will be based on some prior, systematic, and rational evaluation of performance. In the absence of clearly defined criteria and standards, and lacking sufficient data, resources and procedures to ascertain the quality and impact of programs, however, it should come as no surprise that these evaluation exercises will in most cases be resolved more on political grounds and less on the merits of the individual case. Making selective cuts at a state coordinating or consolidated board level also places a heavy political burden on an agency often thin and fragile in political support.

*Formulas on the Downside: Equity, Marginal Costs and Strategic Considerations.* Pursuit of the ideals of equality and diversity, both deeply rooted in the American tradition,<sup>24</sup> have given rise to various policy conflicts in higher education. The competing demands of each ideal are evident in attempts to fund diverse types of institutions and programs in an equitable manner. Should all types of institutions or programs be funded at the same rate, i.e.,  $x$  dollars per student, or on a more sophisticated basis of  $x$  dollars per disciplinary credit hour by level?

The lure of formula budgeting is in large part due to its apparent "objectivity," "equity," and prospects for easing the burden of making repetitive painful judgments. The key assumption in this approach to equitable funding is, of course, that of commonality or comparability. To the degree that institutions, programs and levels of instruction are comparable, formula approaches allocating equal amounts for equal loads do seem to offer a reasonable solution.<sup>25</sup> Recognition of differences, through such means as adding or weighing variables, becomes a sensitive matter—particularly since in a real or

---

<sup>24</sup> For a thorough treatment of the subject, see J. R. Pole, *The Pursuit of Equality in American History*, Berkeley: University of California Press, 1978.

<sup>25</sup> For a brief, comprehensive discussion of formulas, see J. Kent Caruthers and Melvin D. Orwig, *Budgeting in Postsecondary Education* (tentative title) forthcoming from ERIC; for an in-depth look at the construction and politics of formulas in selected states, see Richard J. Meisinger, Jr., *State Budgeting for Higher Education: The Uses of Formulas*, Berkeley: Center for Research and Development in Higher Education, University of California, Berkeley, 1976. For an example of an attempt to overcome problems of comparability, see Freeman Holmer and Stefan D. Bloomfield, "A Resource Acquisition Model for a State System of Higher Education," *Planning for Higher Education*, Society for College and University Planning, vol. 5, no. 5, October 1976.

perceived zero-sum game, one institution's weight becomes another's diet.

Despite deviations from the ideal of equality, formula budgeting will continue to have considerable appeal as an approximation. The burden of analyzing and defending differentiation is real and formula budgeting offers some relief—a benefit not unimportant in administrative life.

A second observation on formulas in the 1980s relates to the problem of marginal versus average costs. We are all well attuned to the advantages (or disadvantages depending upon your point of view) of formulas based on average costs under conditions of rising enrollments and marginal costs under conditions of decline. Certainly refinements can and should be made to reflect fixed as opposed to variable costs under either circumstance. To disregard such variables is to cut or build programs indirectly and without benefit of careful thought and review.

The development of marginal cost-based funding formulas cause two concerns. The first concern is that since the development of widely applicable marginal cost models will take considerable time, average cost-based formulas will be used in the meantime to the indiscriminating detriment of programs. Secondly, I am uncomfortable with some of the inflexibility and incentive problems caused by enrollment-driven formulas based on existing cost patterns. In the relatively rapid state of environmental changes predicted for the 1980s, policies designed to perpetuate or erect programmatic or organizational "palaces" as opposed to "tents" inhibit system and institutional responsiveness so badly needed.<sup>26</sup>

A final point on formulas in the 1980s is one of state budget office as opposed to institutional strategy. Let me cite the case of my own state as an example. Our state budget director recently proposed that higher education institutions be placed on an enrollment driven formula similar to the public schools. From his vantage point I see two distinct benefits in such a proposal. One is that higher education enrollments are projected to stabilize or possibly decline over the next decade. The result, of course, would be to minimize any appropriation increases for higher education. The second benefit is more subtle and more difficult to assess the effects. A simple formula funding approach, while requiring some administrative auditing and review at the state level, affords state budget office staff considerably more opportunity to pursue (or some might prefer the term "delve into") matters heretofore untouched. Whether such probings would be beneficial as a whole is hard to say and is certainly dependent upon such variables as quality of staff as well as whether one sits in the state budget office or the institution.

---

<sup>26</sup>For an interesting view of organizational "palaces" as opposed to "tents," see Bo L. T. Hedberg, Paul C. Nystrom and William H. Starbuck, "Camping on Seesaws: Prescriptions for a Self-Designing Organization," *Administrative Science Quarterly*, March 1976, pp. 41-65.

## Concluding Comments

Christopher Columbus was responsible for thinking of the technique of modern government. He didn't know where he was going, when he started; he didn't know where he was when he got there; and he did it all on borrowed money.

Disregarding the financing scheme of borrowed money, one can arrive at either of the following conclusions from reading the above statement. First, while Columbus may have been lucky, modern government ought not to proceed in such a chancy manner. That is, a more clearly defined, rational procedure is preferable. A second and alternative conclusion could be that many of the most significant things that happen to individuals, as well as organizations, are in fact not planned, measured, or even recognized until long after they happen. We ought not, therefore, to be overly concerned about mapping and knowing in advance.

Perhaps the conclusion each of us reaches from the above statement, or a discussion of the principles inherent in it, reflects the bias or ideology we hold.<sup>27</sup> The conclusion or interpretation reached reflects, I believe, an important dilemma for budgeting in the 1980s. The dilemma centers around whether one believes that goal centered, performance analysis driven models will in fact be further developed and refined, or whether one ascribes a very low probability of success to such models in higher education. The primary question is not one of implementation, i.e., overcoming the political forces opposing such changes or the inherent organizational resistance to change. The central question is rather cognitive in nature, i.e., do we or will we know how to construct such models?

*Differing Perceptions.* The dilemma can be further characterized by contrasting the views of Richard Cyert and James March. Fifteen years ago, these two distinguished scholars co-authored one of the most highly respected books in the field of organizational theory.<sup>28</sup> Since then each has written on managing the university. But, as one long-time friend and observer has noted, their once convergent views of organizational theory have grown asunder in the case of universities.<sup>29</sup> March's views, described in previous sections of this paper,

<sup>27</sup> For a discussion of the role of ideology in influencing our receptivity to alternative budgetary reforms, see Anthony W. Morgan, "Resource Reallocation Reforms: Marginal Utility Analysis and Zero-Base Budgeting in Higher Education," *Higher Education Review*, spring 1977-78, pp. 1-17.

<sup>28</sup> Richard M. Cyert and James G. March, *A Behavioral Theory of the Firm*, Englewood Cliffs, N.J.: Prentice Hall, 1963.

<sup>29</sup> William R. Dill, "When Auld Acquaintance Be Forgot . . . From Cyert and March to Cyert vs. March," in Richard M. Cyert, *The Management of Nonprofit Organizations*, Lexington, Mass.: D. C. Heath and Company, 1975, pp. 63-71.



have expanded upon the principal directions set forth in this early joint work.<sup>30</sup>

On the other hand, Cyert, who is an economist and now president of Carnegie-Mellon University, seems to be prescribing for university management many of the very things he was once critical of in traditional models of business sector behavior, i.e., a strong central hand in strategic planning and reaching agreement on objectives, more emphasis on systematic evaluations and financial forecasts, and greater reliance on price and market mechanisms. Indeed, Cyert's lectures on the management of universities and other nonprofit organizations portray for the most part a rational, tractable environment in which to manage.

*Differing Prescriptions.* March's attack on widely and deeply held notions of rational planning and decision making, like Aaron Wildavsky's and other political scientists' works, are basically descriptive in nature, i.e., telling us how the system really works. Cyert's recommendations, on the other hand, are based on a normative model of decision making, i.e., one telling us how the system ought to work. Such normative models, increasingly the province of the economists with their theories of demand, supply and efficiency, offer a well-defined system of criteria for choice which is both theoretically and emotionally appealing. Political scientists such as March and Wildavsky, on the other hand, offer less in the way of appealing normative models other than to console us that what we're doing isn't all that bad or irrational.

In his prescription, Cyert minimizes the differences between profit and nonprofit organizations and holds out the business model as the ideal toward which to strive. Cyert's prescriptions for curing the perceived managerial ills of universities are to develop objectives, to translate these into firm standards for measuring performance, to centralize the organization, to elicit extensive faculty input in planning and budgeting, to budget first from the revenue side, and to employ analytic models and tools in decision making.

Nonprofit organizations generally tend to be centralized. This tendency is not accidental. The basis for a decentralized design in business firms is the profit center concept. If a nonprofit organization is decentralized, it is usually because of a weak central administration that merely turns budget funds over to decentralized units without attempting to evaluate performance. . . . Therefore, a good manager will tend to centralize the organization and determine the goals the organization should achieve.<sup>31</sup>

March, on the other hand, advises that it is unprofitable to define objectives,

<sup>30</sup>For more complete view of March's theories, see James G. March and Johan P. Olsen, *Ambiguity and Choice in Organizations*, Bergen, Norway: Universitets Forlaget, 1976; also Michael D. Cohen, James G. March and Johan P. Olsen, "A Garbage Can Model of Organizational Choice," *Administrative Science Quarterly*, March 1972, pp. 1-25.

<sup>31</sup>Cyert, *op. cit.*, pp. 13-14.

that the most effective style of leadership is much more subtle and unobtrusive than Cyert's prescription, i.e., March sees the president as a person in a boat who "can select a destination and use his rudder and sails to let the current and wind eventually take him where he wants to go." March concludes that what we really need is new normative theory in two areas: (1) *decision making* in situations where goals are ambiguous; and (2) *management* where much of our present theory introduces mechanisms for control and coordination that assume the existence of well-defined goals and technology. March maintains that when goals and technology are hazy and participation is fluid, many of the axioms and standard procedures of management collapse.

### Analysis, Process, and Leadership

Herbert Simon, recent Nobel laureate for his work in decision theory and a former co-author and colleague of both March and Cyert, uses the following matrix of types of decisions and techniques to map where progress has occurred in the management sciences and what remains to be done.<sup>32</sup>

|                         | Traditional Techniques                  | Modern Techniques                                         |
|-------------------------|-----------------------------------------|-----------------------------------------------------------|
| Programmed Decisions    | habit, S.O.P., organizational structure | OR, linear/dynamic programming, probability, theory, etc. |
| Nonprogrammed Decisions | "judgment"                              |                                                           |

Simon's interests lie in extending the use of "modern techniques" to nonprogrammed decisions. While he discounts the probability of mathematical or optimization techniques being central to these types of decisions, Simon does believe that progress has and can be made in systematic studies of "judgment."

The processes of nonprogrammed decision making are beginning to undergo as fundamental a revolution as the one that is currently transforming programmed decision making in business organizations. Basic discoveries have been made about the nature of human problem solving, and the first potentialities for business application have already emerged.<sup>33</sup>

<sup>32</sup>Herbert A. Simon, *The New Science of Management Decision*, Revised Edition, Englewood Cliffs, N.J. Prentice Hall, 1977.

<sup>33</sup>*Ibid.*, p. 63.

Whether such advances have in fact been made has been questioned.<sup>34</sup> Indeed, Simon made basically the same claims in the first edition of the book in 1960. There is, however, an increasing scholarly interest in organizational decision making under conditions of uncertainty and complexity.<sup>35</sup> Whether such attempts to discover structure in apparently unstructured decision making will prove successful remains to be seen.

*Improving Analysis.* An important question emerging from this literature is, "Under what conditions can the 'modern techniques' identified by Simon and others be applied to various types of decisions?" I believe the answer calls for an expansion of the subcomponents of both the top and left marginals of Simon's matrix, i.e., to specify types of programmed and nonprogrammed decisions as well as types of techniques. The goal model, and its numerous applied variations, may well be appropriate under certain circumstances. Such techniques may also be quite useful in a supportive, rather than central role, in those areas not often thought susceptible to quantification. Analyses based on insightful questions and informed assumptions can be very useful, particularly in exploring policy alternatives. In the all or nothing polemics sometimes employed, we tend to lose much of the benefit to be derived from each side.

*Improving Processes.* In a recent conversation with Charles Hitch, certainly one of the best-known of the RAND economists responsible for bringing economic models to planning and management in the public sector, I asked him whether he was optimistic about the future of such models in university management. His reply was that he never was nor is he now optimistic about such applications—at least in those areas of university management pertaining to the central core of the academic and research missions.<sup>36</sup> His response was not antianalytic. Rather it is a recognition that the organization does not and probably should not meet the requirements of the model; that goals and performance measurement cannot realistically be considered a solution in any algorithmic sense, either in the short or long run. By virtue of their reliance on these basic tenets, many of the productivity and outcome techniques under development will not, in my opinion, be particularly helpful in budgeting in the 1980s.

---

<sup>34</sup> Henry Mintzberg, "Book Reviews," *Administrative Science Quarterly*, June 1977, pp. 342-351.

<sup>35</sup> In addition to the works cited directly in this paper, see Karl E. Weick, "Educational Organizations as Loosely Coupled Systems," *Administrative Science Quarterly*, March 1976, pp. 1-19; Henry Mintzberg, Duru Raïsinghani and Andre Theoret, "The Structure of 'Unstructured' Decision Processes," *Administrative Science Quarterly*, June 1976, pp. 246-275; Jeffrey Pfeffer, Gerald R. Salancik and Hüseyin Leblebici, "The Effect of Uncertainty on the Use of Social Influence in Organizational Decision Making," *Administrative Science Quarterly*, June 1976, pp. 227-245.

<sup>36</sup> See also, Charles J. Hitch, "Management Problems in Large Organizations," Phi Beta Kappa Lecture, April 1978.

Can, however, a modified or "soft" goal model be developed and used, i.e., one backing away from an algorithmic or platonic ideal and one which emphasizes a guidelines or hypothesis approach?

To the extent we cannot discover and apply objective criteria to university planning and budgetary decisions, we must rely on some form of group process or individual wisdom to establish goals and to gauge performance. The fiscal climate of the 1980s may be an opportune time to revitalize peer review, to allow changing expectations to form the basis of new parameters in group processes, and to strengthen otherwise suspect centrifugal leadership. Indeed the climate of the 1980s may be what is needed to sharpen our clinical skills. That is, we will hopefully concentrate a substantial amount of our analytic resources on such processes as "diagnosis," "experimentation," and "consultation."<sup>37</sup> The improvement of such processes is, I believe, the providence of institutional, multi-campus and state coordinating or consolidated board concern. Without cooperation and improvement of group processes, centripetal and bureaucratic tendencies will make universities a rather unpleasant environment in which to work.

*The Role of Leadership.* In addition to possessing Solomon-like qualities and appointing more of the same throughout the organization, the higher educational leader of the 1980s must take a strong hand in (1) influencing the level of expectations and settling appropriate parameters; and (2) judging how much consensus is necessary on each major issue. Both tasks are essential to any serious institutional or system response to budgetary conditions in the 1980s. Peer review without realistic expectations and parameters is dead. Commissioners, chancellors, presidents, vice presidents, deans and departmental leaders need to infuse an attitude of "pruning for growth" at each organizational level. The times will be ripe for such an infusion. Under the fiscal conditions assumed, it is easier to centralize or to enforce ground rules for decentralized actions and easier to plead for good planning and budgeting.

Secondly, leadership needs to understand how to vary management focus and style according to the nature of the issue. In some circumstances, more traditional procedures and norms of consensus may be needed and preferable. Under other circumstances, the need and value of minimal consensus must be recognized.<sup>38</sup>

---

<sup>37</sup>See Garry D. Brewer, "Experimentation and the Policy Process," in *RAND: 25th Anniversary Volume*, Santa Monica, Calif.: RAND Corporation, 1973, pp. 151-163; Kathleen Archibald, "Three Views of the Expert's Role in Policy Making: Systems Analysis, Incrementalism, and the Clinical Approach," *Policy Sciences*, vol. 1, 1970, pp. 73-86; Mintzberg, et al., *op. cit.*, pp. 273-274.

<sup>38</sup>Bo L. T. Hedberg, Paul C. Nystrom and William H. Starbuck, "Camping on Seesaws: Prescriptions for a Self-Designing Organization," *Administrative Science Quarterly*, March 1976, pp. 41-65.

In summary, the common thread I perceive in assessments of university planning and management practices by Cohen and March, Cyert, Hitch, Glenny, Anthony and others is the need to make some hard-headed, yet educationally prudent, programmatic decisions. While some of the existing and promised analytic techniques may aid in this task, informed peer judgment, coupled with appropriate checks and balances by reviewing bodies seem to me to require rehabilitation. My emphasis and prescription is, therefore, process oriented, albeit a different type of process than the policy paradigm Nelson describes as the "organization and control of economic activity." Indeed the three major paradigms for improved public policy that Nelson describes, and upon which the scenarios at the beginning of this paper are based, do not focus upon the type of process orientation presented here. Improving group review processes, coupled with a stronger leadership role in setting expectations and parameters, may seem to many like placing a bet on a tired horse. On the other hand, if we are "interested in being, rather than appearing, rational,"<sup>39</sup> perhaps we ought to rehabilitate that tired horse.

---

<sup>39</sup> Aaron Wildavsky, *The Politics of the Budgetary Process*, Second Edition, Boston: Little, Brown, 1974, p. 208.

## CHAPTER VI

### FINANCIAL MANAGEMENT FROM A STATE PERSPECTIVE

*Robert A. Huff*

Every state has some sort of coordination device. They may vary in fifty different ways, yet there is a sameness about them. In statewide coordination, whether a state Board of Regents or governing board such as in Arizona, or a state coordinating agency, such as in the state of New Mexico, there are certain threads of commonality that run through these organizations. For those persons working in state coordination, there is a lot of action. They are exciting jobs. On a given day you wonder "Who is going to call the shots today?" Is it going to be the Governor, a legislative faction, the Regents, or certainly very often the institutions? It is a razor's edge between a lot of people and must accommodate many things. About the time you think you see some light at the end of the tunnel, it may turn out to be a locomotive coming from the opposite direction.

Financial management from a statewide perspective involves complex relationships implicit in these three little words: why? who? and how? First, why do we have to have this thing called coordination? Why don't states just let their institutions take care of themselves when they do that very well in most cases? Then, second, who do you get to do this kind of a job? And, third, how specifically is the activity carried on, particularly in budgeting and financial management?

Why have such statewide agencies grown up? Of course, a main reason is accountability, the fact that there are so many dollars involved that people cannot ignore them anymore. Also, as Earl Cheit has pointed out, the self-denying ordinance under which universities have traditionally operated is rapidly breaking down. What does he mean by the "self-denying ordinance"? What he really says is that the states, as political entities, have established universities and then set up barriers to prevent political tampering with those institutions. Over the years, political leaders often have stayed an arm's length from the universities, but those barriers are breaking down. The self-denying ordinance is really not being honored the way it once was. Colleges and universities are no longer run only by the presidents or the faculty or the regents, but in many cases there is a new actor, the statewide coordinating



agency. Questions of access, new programs, expansion of all kinds, are no longer going to be settled on the individual campuses. This does not mean that the campuses are not going to take the lead and the initiative, because they are and they must. But increasingly, the institutions must secure concurrence with the directions they want to move and the way they want to go in their organization. Hopefully, this does represent their best interests, but, to repeat, the coordination office sits on that knife edge of the political process, whether it is the governor's office or the legislature.

In some states, the institutions have "blown" some of their credibility by appearing almost insatiable to the legislature. The question too often is not how much do we really need, but how much can we get; what will the traffic bear? The best salaries in public life usually are in colleges and universities collectively and those persons in higher education are easy targets, especially since the quality of the educational process is being greatly challenged in some states.

A problem for higher education is that members of our society have come to expect a great deal from their institutions: to be parental substitutes, when they know they have not done too well with all their children themselves; to find solutions to impossible social problems, such as reversing the declining work ethic; and certainly all are expected to have winning football teams. And the universities cannot do all of this; they probably cannot succeed fully at any of these things, so they are destined to receive some criticism.

Higher education is labor-intensive and does not appear to have increased productivity, especially over the past decade. On the other hand, with the increase of the body of knowledge it takes a lot more effort now. There is much more to cover, to teach, in preparing a chemist, or an anthropologist, or an engineer than there was just a few short years ago. So it is an increasing body of knowledge to be dealt with, and somehow we must recognize there is more to do. With some exceptions, the dollars have not expanded to take care of it adequately. Any apparent significant percentage of real capital from the GNP has been eaten up mostly by inflation or, in some cases, by expansion. There appears to be a very significant transfer of real capital which is somewhat illusory.

Another part of the dilemma that we have, and must recognize, is that higher education is lumped together with other social agencies such as corrections and welfare where there has been a very real transfer of capital of the gross national product to those areas. When industrial and individual taxpayers start to hurt, higher education is lumped together with those other areas. Then, when the legislature needs to restrict financing, it cannot reach the welfare and social security system, but it can reach the university budget. All of these various problems—suspect selfish performance, unmet high expectations of the society, and taxpayer resistance—result in development of, or further emphasis on, state regulatory agencies, some governing and some coordinative.

Second, *Who* does this "not-very-easy" work of coordination? What kind of character do you go out and get? What are the attributes? The number one attribute of the coordinator is a willingness to toil with the political figures. You have to be willing to work with them day after day and not just show up once in a while. This is necessary to develop credibility, to develop the needed liaison, to develop the ability to get the message across. It has been said that coordinators need these five attributes: (1) the stamina of a Greek athlete, (2) the cunning of Machiavelli, (3) the wisdom of Solomon, (4) the courage of a lion and (5) the stomach of a goat.

In addition, coordinators must be good administrators, and good administrators practice coordination. Very few people, especially at the statewide level, have developed the power to go it alone, to make unilateral decisions. A president of a university, or a statewide person, or nearly any administrator has to practice the art of coordination to be successful over time. It is good that we do not concentrate too much power in one place. Occasionally we have and occasionally we do. There are some people around the country whom I would have to call "czars" of higher education either in their state or in their institution; and they pull it off. As time goes by, they are probably fewer and fewer. Contrast the attributes of a coordinator as opposed to the attributes of a person who practices as a "czar" of higher education. A coordinator is patient; the czar is short-fused. The coordinator is flexible; the czar is rigid. The coordinator is mature; the czar is experienced. The coordinator is intelligent; the czar is shrewd. The coordinator is sharing and willing to look at the data; the czar is selfish and secretive about source data. The coordinator is calculating and orchestrates activities; the czar is often ruthless. For all of his effort, the coordinator is often resented; the czar is feared. Put the same person in one role or the other and he or she will tend to develop these attributes. As a result, we all ought to thank our lucky stars that we have this political system, this mechanism that seldom concentrates too much power in one place.

Third, *How* is coordination carried on, particularly budgeting and financial management? Much of the work centers around the justification of budget requests. Somehow when we sit down and talk among ourselves as higher education people, we talk in somewhat esoteric terms. We justify our dollar requests and all of those justifications sound very good in our private groups. Then one day in legislative committee meeting the same words sound very hollow. They do not have the same appeal and they do not have the same effect. They sort of "fizzle out" and we realize that we need a lot of common sense. In fact, we realize that sometimes educators' common sense is not a legislator's common sense—the two are somewhat different on occasion.

In six years at NCHEMS we were conceptualizing data and budgeting systems, trying to develop and crystallize thinking techniques, doing cost studies and defining some analytical processes. Some of these things, some of these ideas

which we thought would work, *do* work. They do not work perfectly or in an absolute sense. However, when adapted, adjusted and shaped into local needs, and when not frozen into a straightjacket, there is some good in some of these conceptualizations.

The reality of going into a state, however, and dealing with real institutions, real budgets, and a real legislature (where you get bloody every once in a while) is different from conceptualization. Maybe we fear legislators too much. I don't know. I greatly respect legislators. Did you ever stop to think just how difficult their job is? One legislator in New Mexico, whom I admire, holds a difficult committee chairmanship, works hard, and has been very successful. Toward the end of a difficult session, I asked him: "How do you manage it? How do you get along? How do you put up with it? Why do you put up with it?" He said, "It is tough, let me tell you that. I operate on the principles of the three 'F's.' First, you have to get your facts. If you don't have the facts when you go in, you're dead in the water and you'll never win. The second 'F' is fun. You've got to take time out on the way to have a little fun. The third 'F' is philosophy. You have to have a good solid philosophy." When people like that are in our legislatures, what do we have to fear?

Next, there ought to be a structured, regularized approach to developing funding recommendations for institutions, probably using formulas. Czars do not like formulas because they cannot personally change the results. Coordinators believe that cooperatively developed formulas are more fair. I compare formulas and line item budgets this way. Formulas insure consistent treatment, perhaps not always equitable, but consistent. Line item budgets encourage subjective tinkering. We do not need a state level person to determine that an institution does not need that "trash can lid" and put a line through that item. Second, formulas make punitive action difficult but line item budgets allow reprisals. Third, formulas work best in the sunshine and line item budgets work best in smoke-filled rooms. Fourth, formulas are based on policy and line item budgets are based on politics. In someone's judgment, the policies may be wrong, but actions are based on the known policy. So I like formulas and I like the idea of a regularized formula, although I have not seen very many that I like.

As the next theme, are we asking the right questions during the budget building process? An incremental line item budgetary process often masks the right questions and comes down to some very subjective things. What justification is there for the increase or decrease in the number of faculty positions? Do salaries need to be increased at one institution versus another? Or, in one area of the institution versus another? What adjustments in non-salaried items need to be made? Where is the "fat" and where is the "lean," relatively speaking? Is there any relationship between instructional costs and the so-called general support costs? If so, what is that? The question again is not "How much has each institution had?" or "How much can they get?" but, "How much does each institution need?"

Further, we need to consider institutions not as total entities but in segments. A formula for budgetary approach ought to differentiate between different disciplines, different units or segments of the institutions, different levels of instruction. It costs a whole lot more to educate a graduate student in engineering as opposed to an undergraduate student in psychology or the social sciences. Yet in too many places still, a student is a student is a student. When one walks through the door, the basic funding remains the same whether the student costs X number of dollars at the graduate area or X number of dollars at the undergraduate or lower division level. If we are going to do our job properly, we have to recognize that the mission and kinds of programs that an institution has, even the size of the institution, may have something to do with the proper level of funding for that institution.

Very occasionally, funding formulas have been developed in states and then cast into their statutes. I cannot think of anything worse. That is the way to develop a straightjacket. Formulas need flexibility and should never be statutes.

In New Mexico over a period of four years, a flexible functioning formula has been developed. It deals with fourteen different discipline clusters, at three different levels of instruction. For each discipline, there is a so-called "productivity ratio" that is very simply the number of credit hours that it takes to justify a faculty position. It is just a little simpler terminology and a somewhat handier and effective ratio. The number of credit hours in each discipline and at each level to be generated, divided by the productivity ratio, gives you a number of faculty positions. When multiplied by salary and fringe rate, plus the other direct costs, this results in an expenditure level, a need for that institution based on the assumptions or the funding factors that have been included. The key is the funding factors, the negotiated items hashed out with the universities where everybody has a say about all of the right questions. The funding factors that have gone into the New Mexico formula were not arrived at quickly or easily. The institutional people put them down there, more than the central staff.

As a result of this process several important points became clear.

\*It is important that you get all of the dollars on the table, to talk about expenditures first and then how to meet that expenditure level.

\*Relate discussions, about how you want to operate, to the classroom. How do you want to teach? For funding purposes, how should it be done for graduate engineering, for upper division social sciences?

\*Doing this regularly for every field is critical. Differences in teaching method and level, plus size of institution, result in wide variations in such formulas. (In New Mexico for 1979, the lowest unit costs were lower division social sciences at \$29.41 and the highest unit costs were in graduate level

engineering at \$317.00 a credit hour.)

\*Most people do not realize the variation that exists in differential unit costs of instruction by disciplines and by levels. That is why we need to treat the budget analysis process in the instructional area on a differential basis. A student is not a student is not a student. Some of them create a much greater need for dollars than others. (An interesting effect of the differential approach took place last year at the University of New Mexico. They went down in enrollment, but went up in dollars due to enrollment changes. They grew at the graduate level, in expensive disciplines; they lost their enrollment at lower divisions, in less expensive disciplines. The net result of a loss of enrollment was a gain in funding level, that took some explaining to the legislature. It is counterintuitive, but it really was the payoff for going through this differential process.)

\*There is a small relationship between changes in enrollments and so-called "fixed costs" or general support services. Some universities are going up in enrollment and some of them are going down. (After thorough institutional discussions, it was agreed in New Mexico to take fifty percent of the change in instructional dollars and apply that change to the general support dollars. It was a subjective judgment, but it was the wish of the institutions that it be that way. The one caveat was that it works the same going both ways. This is a subjective judgment that will be a point of negotiation and review every year with the institutions.)

\*A point of controversy has been the utility rates. They are going right through the ceiling. For utilities and other unusual costs such as insurance increases we finally agreed on a 15% increase after considerable negotiations.

These are some of the major negotiation points, key decision points in this process. It is not line item, it is policy development. It provides consistent treatment and is out in the sunshine, in the open. Everyone involved knows what is being talked about and talk a common language. The legislature understands. We can tell them how we got from here to there. It also pinpoints the places where the institutions need to lobby, where that central staff needs to lobby, where we need to get our act together. As a result we know the key issues and can concentrate our efforts effectively.

## CHAPTER VII

### PROBLEMS OF VARIABILITY IN FINANCING POSTSECONDARY EDUCATION IN THE 1980s

*John B. Lee*

Various colleges and universities are going to fare differently in the decades of decline that we are facing. Some of the differences in enrollment will be central to understanding the financial conditions that institutions will face. The problem is not so much management of decline, but management of variability.

It should be understood that these are guesses, hunches and predictions that rest on very little evidence. We have proven time and again that we are bad at forecasting. At the same time, each one of us works from a subjective sense of the future that affects our current decisions. The purpose of this paper is to provide you with what may be a slightly different view of what the future might be.

Last fall (1978) the number of high school graduates was the largest in the history of the country and it will be the largest for the foreseeable future. It will drop by about 1.5 percent a year for the next 10 years. The number of 18-to 21-year-olds will crest this coming year and will decline by roughly 14 percent by 1986.

The total collegiate-level enrollment peak will probably be reached by 1980-81 or 1981-82. From the peak year, enrollment may decline 15 to 20 percent by the end of the 1980s (Parker, 1978).

These figures in one form or another are familiar to all of us. The questions that are important have to do with what the numbers mean for the continued vitality, health and quality of higher education in the nation.

My four major conclusions follow, with some of the reasons for them.

1. There will be increasing variability in enrollment with greater variations from year to year and greater differentiation between institutions and with institutions.
2. Overall enrollments will decline. Part-time and non-traditional students will not replace the loss of traditional students.



3. Institutions currently serving minority students will be among the hardest hit by declines.
4. As institutions undergo decline, the cost per student will increase.

The picture which I perceive is bleak. It will demand more sensitive planning at the national, state and local levels in a time when planning will become more difficult because of the unpredictable nature of conditions. It also means that more detailed data collection and analysis will be needed at a time when there will be pressure to cut the overhead staff necessary to collect and analyze the data.

### Increased Variability

Institutions will fare differently in the near future. Although some will increase enrollment, most will lose, some more than others. The top line prestige institutions, both public and private, will be able to maintain enrollments at the undergraduate level. Faculty will grumble about less qualified students as standards are lowered. Graduate departments will suffer as demand for new college faculty drops. There has already been significant loss of federal funds for research projects. This will tend to drive up the cost of undergraduate training in these institutions as the use of teaching assistants declines and regular faculty take their place.

Most predictions indicate that community colleges can expect to enjoy healthy increases in enrollment while other institutions struggle with decline. This is based on an extrapolation of past growth and an assumption that community colleges will serve an ever increasing adult population. I question both of these assumptions. We have already been through the adult education revolution. Community colleges have been pursuing adult enrollments with vigor for the past 10 years, but it is unlikely the pace can be continued. Some of the supporting evidence will be outlined in a future section.

The other thread of the argument comes from a review of elementary-secondary enrollment declines. They tend to be greatest in big central city districts (ECS, 1976). These are the very centers of the community college enrollment base. As people leave the cities for suburbs and smaller urban centers, the colleges will have more trouble in securing enrollments. There will be increases in the community colleges serving the suburban areas and smaller cities that are experiencing greater growth.

There have been reports of statewide declines in community college enrollments. Two examples are Colorado and Kentucky. Analysts in both states believed that decreased enrollment was due to increased demand for labor. It appears that community college enrollments should rise when the local labor

market is depressed, and enrollments should drop when demand for labor increases. Community colleges enroll more of these marginal students who are tempted in or out of college by external factors.

The colleges in the private sector face unique financing problems because of their strong reliance on tuition as a source of income. Thus their enrollment declines are likely to have more immediate impact on income than is the case in public institutions. The smaller, less selective and least well endowed institutions are the most vulnerable of the privates. Nine hundred eighty private institutions enroll fewer than 1,000 students (NCES, 1978).

Conditions are already difficult for this class of institution and likely to get worse (Lanier and Anderson, 1975). The problems are not due to extraordinary declines in enrollments, but because private institutions are financially vulnerable. The availability of student financial aid has made a great deal of difference to the continued operation of these institutions.

The final category of institutions to be considered is the four-year public colleges. They are not prestigious and draw the majority of their students from the surrounding region. Many of them developed as teacher training centers and still have a preponderance of their enrollment in that field. On one hand, the more promising of their potential students may be attracted to the university and the less academically motivated may be willing to enroll in community college technical-vocational courses. It is difficult to determine how much loss these institutions will take. It will depend in large part on local conditions.

Institutions located in states that will have continued population growth should fare well. The states most likely to gain are Arizona, Florida, Nevada, California and Hawaii. Generally the Sun-Belt theory of migration seems viable. The remaining states are expected to lose population or at best remain stable. The institutions in these states will not face the same problems as the private sector because they tend to be larger and, by inference, have more margin for reduction of cost before they go out of business.

The increased variability of enrollments will make planning more difficult both for institutions and states. Techniques need to be found to protect educational programs that are deemed important but that are vulnerable to the vagaries of enrollment shifts. Procedures need to be developed that will protect institutional budgets from sharp annual changes in enrollments. Ways need to be found to dampen the development of new programs that are designed to increase enrollments without regard for educational quality. These challenges need to be met in a period of decline.

### **Enrollment Decline**

Enrollment reflects a number of factors, many of which are not clearly

understood. Reference has already been made to the possible impact of job opportunities for high school graduates. That needs to be balanced by the perceived returns for investment in a college education. A student may enroll because the long-term return in the form of income or quality of life outweighs the costs of attendance, including foregone income.

Inflation and recession are manifested in other ways that might affect enrollment. Inflation may erode savings for college; recession may cause families to divert funds from college costs to more immediate emergencies.

With these vagaries aside, most colleges hope to replace the expected loss of traditional students with an increasing number of adult students. I believe that this has already happened. We should not expect continuing steep increases in the enrollment of adults.

The number of institutions sponsoring adult education more than doubled from 1968 to 1976, going from 1,102 to 2,225. Both public and private colleges increased their offering in this area. One assumes from these numbers that most of the large institutions in this country have already made the transition to providing adult education programs.

The enrollment numbers reflect this revolution. The divergence between full-time equivalent enrollment and headcount has increased significantly since 1965. Part-time students accounted for 39 percent of college enrollments in 1975 and, if the trend continues, will comprise 46 percent of the enrollment by 1985.

According to the National Center for Educational Statistics (1978), of the 17 million adults enrolled in part-time education in 1975, less than 4 million were in traditional colleges and universities. Enrollments in adult part-time enrollment increased over 50 percent in all categories except general education which showed a slight decline from 1969 to 1975.

My pessimism about increasing enrollments in these categories is based on two factors: 1) Most institutions able to do so have already developed a significant program for part-time students. 2) The area with which colleges are most identified, general education, seems to have the least appeal for part-time students who are more interested in occupational skills, social life and recreation courses.

#### **Service to Minority Students**

It appears that many institutions which have traditionally served black students are most vulnerable to decline. The private black school in the Southeast and the central city open access colleges serve a sizable share of black students. Both, according to my analysis, are on the most vulnerable list for

different reasons—the community colleges because many are located in cities that continue to lose population and the privates because they are nearly totally dependent on tuition.

There has been a significant increase in the participation of blacks in college, nearly reaching parity with whites. As a consequence these colleges cannot in all probability look to significant increases in black participation even though blacks will make up a larger proportion of the age cohort because of higher birth rates. If the institutions that serve the black community face significant cutbacks in funding because of reduced enrollment, the educational quality and financial health of these institutions could suffer inordinantly. This is an important enough possibility that a special study might be focused on the issue.

The Spanish speaking community poses a different problem. First, there are several different cultural groups that share very little except a language; second, they are concentrated in a few states: California, Arizona, New Mexico, Colorado, Texas, Florida, Illinois, New York and New Jersey. Third, their postsecondary education participation rate is far below that of whites or blacks. There is a great deal of potential incentive for institutions in these states to attract and hold Spanish speaking students. It is the fastest growing segment of the population because of high birth rates and immigration. There are enrollment gains to be made by serving these students. The Southwestern states also tend to be among those states that can expect a favorable climate of economic and population growth. They should be equal to the challenge.

### **Increase in Student Costs**

Costs per student can be expected to rise in a period of decline. The evidence is in the public sector. Costs per student tend to rise by at least 20 percent in a period of decline (ECS, 1976, Froomkin, 1978). These increases are generally not controllable in the short run.

Personnel cuts lag behind enrollment declines by at least a year. In order to implement a reduction in force, there must be significant enrollment losses in a specific department. Losing 50 students overall does not result in the loss of a departmental staff member.

Even as staff is cut, seniority provisions usually require that the least senior and least costly faculty are cut first. Part-time and nontenured faculty go first. This leaves the highest paid staff in the institution, which pushes up cost even if the same faculty student ratio is maintained.

Operation and maintenance expenditures cannot be reduced much as enrollment declines. In fact, energy costs are rising at a faster rate than any other cost in higher education.

Costs per student tend to rise less sharply in the private sector, reaching only about 12-13 percent. This may be a reflection of the harsher realities that private colleges face. They cannot argue for financial "hold-harmless" appropriations or for special allocations from government that are available in the public sector. Some analysts have argued that one of the key problems in the decades of decline is helping public institutions go out of business as easily as private schools. If this period is not managed well, we face irreparable damage to individuals and to the society.

Most institutions recognize that enrollments are probably going to decline but almost every institution thinks that it will happen somewhere else. Planning for enrollment decline is a statewide problem. The state agencies should take a rather broad view of the total higher educational enterprise in the state as being dependent upon the success of each of its component parts.

The need is for long-term policy with short-term management objectives in order to manage the planning for enrollment declines and for the appropriation reductions which follow.

The state coordinating boards may be in a dilemma. If they predict an enrollment decline, it may contribute to a lack of service being provided for populations that may need it. If they fail to predict a decline, the board can be criticized for not anticipating what would happen.

States can help improve management during this period. Let me at least suggest some changes that should be considered.

- For marginal pricing, institutions could agree on enrollment targets and receive funding on the basis of the target. Deviations could be funded at the marginal cost instead of the average price. This helps to improve planning and reduces incentives for growth. It also provides protection from unforeseen declines.
- Allow institutions to keep a portion of funds that they save by improving efficiency of operation.
- Provide student aid programs that are sensitive to tuition so that private colleges can continue to attract students.
- Allow institutions to develop budgets on the basis of the previous three years to help smooth out annual variations.

These four examples suggest the direction that states could take to provide incentives that are appropriate for a time of variability.

## BIBLIOGRAPHY

- Froomkin, J. and C. McCully, *A Review of Financial Developments in Higher Education, 1970/71-1974/75, and a Prognosis for 1980-1985*. EPRC for Higher Education and Society, February 1977.
- National Center for Education Statistics, *The Condition of Education*. U.S. Government Printing office, Washington, D.C., 1978.
- Odden, A. and P. E. Vincent, *The Fiscal Impacts of Declining Enrollments*. Education Commission of the States, Denver, Colorado, December 1976.
- Parker, C.G., *Collegiate Enrollments in the U.S., 1977-78*. American College Testing Program, Iowa City, Iowa, 1978.



## CHAPTER VIII

### TUITION AND STUDENT FINANCIAL AID POLICIES AND MECHANISMS FOR DISTRIBUTING FEDERAL STUDENT FINANCIAL AID

*William B. Hyde, Jr.*

The incentives for institutions to change their tuition pricing policies and their financial aid policies as a result of modifications in the way federal funds are distributed under student financial aid programs are a first major topic to cover. The second main comment has to do with certain inconsistencies in the federal, state, and institutional policies for pricing tuition and for distributing aid. In many instances, the purposes of some federal programs are not well defined, or, in cases where we are willing to assume that they are reasonably well defined, they seem to work at cross purposes with state or institutional objectives.

These comments should be taken in a broad context and considered in relation to the reauthorization of the Higher Education Act of 1965. However, this paper is restricted to: (1) consideration of the Middle Income Students' Assistance Act that was just recently passed by Congress and (2) the new allocation mechanism that will be used next year for distributing federal funds for the campus-based student aid programs. The Middle Income Students' Assistance Act has two key provisions: one of them expands student eligibility for a Basic Grant well into the middle income range, and the second is that there now is no income limitation for eligibility for a Guaranteed Student Loan.

First, there is a possibility of institutions modifying their behavior by raising tuition or reducing student financial aid in an effort to capture more federal dollars that flow to the institution through students who receive Basic Grants. It is important to note that with or without the Middle Income Students' Assistance Act, tuition probably is going to go up for the next several years, if for no other reason than inflation. But, in addition to this increase, some institutions will probably raise tuition above the amount dictated by inflation either to save their own resources or resources of the state and essentially to substitute federal dollars for their own. One can not, however, generalize for all institutions. Whether an institution finds these incentives sufficiently attractive to modify its pricing behavior depends on the enrollment demand elasticity with

respect to price (tuition) which is a function of, among other things, the proportion of the student body that is eligible to receive federal benefits and the market position and strength of each institution. An institution that has very little competition and for which the student has no viable educational option is in a far better position to raise tuition than other institutions faced with a number of competing institutions. There has been some analysis of the effect of competition among types of institutions, and results show that institutions, such as doctoral granting or research universities, offer a distinctive program that is not easily duplicated by other institutions. Some of the less selective private liberal arts colleges seem to be most prone to price and enrollment fluctuations. Consequently, they would have a particularly hard time raising tuition levels above that of other similarly situated institutions.

My research on the tuition pricing behavior of vocational proprietary schools indicated that there were a small number of proprietary schools that probably raised their tuition levels specifically for the purpose of capturing federal dollars. These schools were located in inner city areas and served educationally disadvantaged students. These students had no other viable educational options. While the overall average tuition for schools offering this particular type of training was about \$800, the tuition in a few of these inner city schools approached \$1,500, which at the time was the limit under the federally insured student loan program. The close approximation of the tuition level to the maximum loan amount probably was not coincidental.

A second key point to make has to do with the single-mindedness with which the federal government has designed the basic grant program. As it now stands, the award amount under a basic grant is sensitive to the costs that an individual student faces, but no account is made of the level of educational expenditures that a state or an institution provides to every individual who attends that particular institution. It also does not account for the effort that taxpayers in a state may make to provide the educational services that are enjoyed by the students attending the state's institutions. For example, there may be two institutions located in two different states. The people in one state may feel that education is primarily a private concern, and the people may not be able to justify a high level of support for education. Consequently, they may set tuition at a relatively high level. People in the other state may believe that education should be provided largely by the state and, thus, may set tuition at a relatively low level. However, the first situation puts the federal government in a position of essentially working against the dictates of the taxpayers of that state in that the federal government will provide more financial support for students in that state than in some other state where the tuition may be lower. There may be an argument to be made for federal support based on fiscal federalism, but that argument has not been given in support of the federal need-based programs. Another example might be one in which both states are equally concerned about education and think that it is a public responsibility to provide educational opportunities. Nevertheless, one state may have more financial capability,

because of its wealth, to subsidize the higher educational system, and, therefore, have lower tuition than a less wealthy state. In such a case, the role of the federal government is one of compensating for disparities in wealth across states—a completely different issue from that of trying to offset the preferences expressed by states. It seems clear that the question of what the relationship should be between federal and state governments has not been adequately addressed.

The basic grant program is considered to be the foundation of the student need-based financial aid system and is not likely to be changed significantly in reauthorization of the Higher Education Act. However, if we are willing to accept the notion that the basic grant program is to provide access, it has certain implications for what other governmental agencies do. Often it has been said that the federal government should provide access and that the institutions or the states should be responsible for providing choice. This division of responsibilities, however, would often result in a situation in which states inadvertently shift their support toward less-than-low-income students, many attending private institutions, to a much greater extent than originally intended by the states.

It is impossible to talk about student financial aid, particularly this year, without saying something about the loan programs. There are two basic loan programs: the National Defense Student Loan Program (NDSL), and the Guaranteed Student Loan Program (GSL). Traditionally, the NDSL has been intended to serve lower income students; and the GSL, students that are not necessarily low income, but who are also needy because they happen to attend expensive institutions. This arrangement of one program serving low income students and another program serving higher income students may well not persist under the Middle Income Students' Assistance Act and under aid program modifications likely to occur. The loan programs may be altered in several ways, but it is quite possible that, under certain circumstances, the differences in the student populations served by the NDSL and GSL programs will become more accentuated or that the loan system will devolve into one program. In the last few years, banks, in making guaranteed student loans, have generally given loans to higher income people because the banks consider them to be lower risk individuals or because their parents or the students themselves have accounts at the banks and the banks prefer to serve their clients first. With the income limitation for eligibility for Guaranteed Student Loans removed, there is a very good possibility that the resources that a bank is willing to put into this program will go, even to a greater extent than in the past, to higher income students, forcing lower income students to turn to other loan programs, including the National Direct Student Loan Program, accentuating the difference in student populations served by the two loan programs. While it may be the purpose of the federal government to serve low income, high-risk students through the NDSL, institutions may not want to be involved in providing and servicing high-risk loans.

A different situation could evolve under certain circumstances in which the government becomes a lender of last resort. Currently, there are a number of disparities in the costs to a student of holding a loan under different programs. One of the biggest costs is the interest that is charged on loans. Guaranteed Student Loans carry a 7 percent interest rate for the student, and NDSL carries a 3 percent interest rate. Over the life of a loan, a student can realize a significantly greater reduction in the cost of a NDSL than for a GSL. If there is no income requirement for eligibility for a loan and if the government guarantees every student a loan who is not able to obtain one elsewhere, it is quite plausible to expect many students, including higher income students, somehow to manage to place themselves in a situation where they need to go to the federal government as a lender of last resort. Under these conditions, there would be virtually no demand for loans under the GSL program.

The funds for campus-based student aid programs have been distributed in the past among states on the basis of enrollments and among institutions within a state on the basis of requests for funds submitted by the institutions to regional review panels. This allocation mechanism has been criticized because it is, to some extent, arbitrary and promotes grantsmanship among the institutions.

Beginning with the 1979-80 year, a new allocation mechanism will be used for distributing these funds. Two aspects of this new formula and the allocation mechanism deserve attention. First, the use of the formula that will be used for allocating funds may occur sooner and be more extensive than is generally recognized. It is likely that by 1983, 60 percent of the funds will be distributed by the formula, despite the facts that the use of the formula is to be phased in over a number of years, that it is going to be applied only to new money, and that there is a hold harmless provision under Part A. This calculation is based on the fact that the hold harmless provision is less than perfect and an assumption regarding federal appropriations in a period of inflation. The hold harmless provision is less than perfect because it does not guarantee 100 percent funding of the previous year but only 90 percent and that applies each year so that there is a compounding effect—this is, 90 percent in the first year, 81 percent in the second, and so on.

The other factor is that Congress may increase appropriations at a rate of about 8 percent a year simply to keep pace with inflation. These additional appropriations made for inflation will not, however, be distributed under the hold harmless provision but will be distributed through the new formula. What effect this will have on a particular institution by distributing 60 percent or even eventually 100 percent of the aid through the formula is not predictable. It is not predictable because there is no known relationship between the amount of funds that an institution has received from campus-based programs in the past, under the old system, and the financial need that will have to be documented through the use of the new formula in the future. There is some evidence that there will be significant variations from institution to institution and that these

variations may be greater than 50 percent of the amounts awarded in the past. The Office of Planning, Budgeting, and Evaluation in the U.S. Office of Education simulated the distribution of campus-based program funds under the new formula among institutional sectors in five states and found that there were a number of variations where the funding levels fluctuated by as much as 50 percent, under the assumption that 100 percent of the funds were distributed through the formula, rather than 60 percent or some lesser amount that would occur during the initial, phase-in years of the new formula.

A last point is the incentives for institutions to raise tuition to gain additional financial aid assistance under the campus-based programs, specifically the Supplemental Education Opportunity Grant Program (SEOG). There are a number of factors—economic, political, and so forth—that influence the pricing policies of institutions; and the parameters that are included in the formula for allocating campus-based aid are only a few of them. However, to the extent that institutions are responsive to the incentives built into the structure of the formula for distributing SEOG funds, a rather perverse situation arises. The formula is a function of the total cost to the student minus the sum of expected parental contributions plus federal, state, and institutional grants. Under this situation, there is an incentive for each institution to raise its costs to the student and thereby capture more funds from the federal government. However, the application of the SEOG index formula is such that, while it happens to be to each institution's advantage to follow the practice of raising costs in hopes of gaining more federal dollars, no increase will occur if all institutions respond similarly. The amount of funds that actually goes to an institution is based on the institutional SEOG need index relative to the total national SEOG need index for all institutions. Therefore, it is quite probable that each institution, figuring that it is going to raise its costs and capture a larger share of the funds, will find itself no better off because all institutions may act in the same manner, leaving unchanged the portion of funds that a particular institution will capture. This is not to say that there will not be some shifts among institutions. Other considerations being the same, the net gainers will be institutions that are able to raise costs to the students the most.

These comments are not offered with the intention of criticizing the programs. However, they indicate the complexity of issues of education finance among levels of government, institutions, taxpayers and students, and that policies of higher education finance are often designed with less than appropriate consideration for the full range of individuals and institutions that are affected by these policies. Being critical of existing policies is easier than proposing better policies, but pointing out existing shortcomings is a first step toward examining alternatives.

## CHAPTER IX

### FINANCIAL ACCOUNTABILITY

*Richard M. Millard*

Financial accountability is a broad term which needs to be seen in a still wider perspective of postsecondary educational accountability in general. Fiscal audits are an integral and necessary part of financial accountability. The necessity for an independent fiscal audit is clear and is a well accepted fact both by institutions and governmental agencies. The procedures for audits, both internal and external, are well established. Manuals are available with standardized procedures for accounting and auditing such as the *Audits of Colleges and Universities* published by the American Institute of Certified Public Accountants (revised 1974). There are also guides for financial and budget officers like *College and University Business Administration* published by the National Association of College and University Business Officers (1974). Finally there are guides for the translation and communication of financial data for the purposes of planning and management such as *The Higher Education Finance Manual* (1975) and *State Level Postsecondary Education Financial Reporting* (1978) published by the National Center for Higher Education Management Systems. All of these are important, but, fiscal audit and guides for business officers are not the major subjects of this paper.

Financial accountability in contrast to fiscal audit relates not only to the accuracy and adequacy of fiscal records, but also to evidence of the efficient and effective utilization of resources in the achievement of educational objectives. While postsecondary and higher educational systems have always been held financially accountable, to a greater or lesser extent, the demand for accountability, efficiency and effectiveness has increased in the last few years and promises to increase even more in the future. We have already seen growing concern on the part of legislators and budget officers with performance measures and quality of outcomes and the need for relating these to the budgetary process. While such budgetary reforms as planning, programming, budgeting and evaluation, zero-based budgeting, and priority budgeting have had only limited success, the concern with relating budgeting to performance and quality of education is increasing. The fact that we do not have very good outcome measures and what we have can be misused does not change the basic and growing concern.



This increased concern for budgeting in relation to educational efficiency and effectiveness, as you are well aware, grows out of a number of things not the least of which is the tax limitation movement and its probable or anticipated impact on funds for postsecondary education. Of even more importance are the prospects for variable or declining enrollments and the need for retrenchment and even demise of some institutions and programs. This, in turn, is related to the growing competition among institutions for students. All of these raise questions of quality, equity and ability of institutions in a non-growth period to meet the variety of postsecondary educational needs of citizens of the states.

Accountability is a broader concept than financial accountability and includes the added dimensions of management efficiency and educational effectiveness. But first it is necessary to start with a broad definition of accountability. A current task force of the Education Commission of the States on state-level accountability in postsecondary education has developed the following definition:

Accountability is a concept and process directed toward the setting of goals, measuring of progress in relation to these goals, and reporting to the people of the state through the responsible governing agency or state authority on the degree of effectiveness and efficiency in the operation and attainment of objectives by system, institutions, programs, and centers of educational activity.

This definition has a number of implications.

First, it underlines the direct relevance to accountability of planning and goal-setting at program institutional and state levels. Without effective planning the frame of reference for accountability is clouded. The definition further suggests that financial planning must be linked to academic planning, planning for research, for community service, and all the other activities that educational programs, institutions or systems are or should be involved in. Lyman Glenny in his *State Budgeting for Higher Education: Interagency Conflict and Consensus*<sup>1</sup> underlines the frequent disjunction of the budgeting and the planning process both at the state level and within institutions. What this disjunction means is that the budget, which is the practical planning implementation instrument for any state or institution, is usually an ad hoc, incremental budget. This limits the possibility of accountability beyond fiscal audit. Planning should provide a framework in which accountability makes sense—that is, it provides goals and objectives which should be the basis for the budget—which is the short range, tactical plan. This means the planning process must involve a sophisticated analysis of social, educational and institutional needs and explicit development of goals related to such needs plus developing the means of translating them into

<sup>1</sup>Glenny, Lyman, *State Budgeting for Higher Education: Interagency Conflict and Consensus*, Center for Research and Development in Higher Education, University of California, Berkeley, California, 1976.

fiscal terms. It also means that the legislature, the governor and to some degree the concerned public must be aware of the plan or plans and be supportive of the plan or plans in principle if not in detail.

Second, the definition underlines the critical importance of goal setting and of the assessment of progress towards meeting the goals. This includes both systemwide goals and institutional goals and their congruence with each other. Development of "role and scope" becomes not simply a description of what institutions are currently doing or an exercise in broad generalities but a specification of institutional functions and objectives vis-a-vis other institutions in the system and the functions and objectives of the system as a whole. Something comparable to role and scope, i.e., clear identification of functions and objectives, becomes essential also at departmental and program levels and these objectives and functions need to be developed within the framework of institutional role and scope. Just as departmental or program objectives cannot be developed in isolation or independent of institutional objectives, so also institutional objectives-role and scope-cannot be developed in isolation and must be formulated with system and statewide goals and objectives in mind. This places a major responsibility on the statewide board responsible for planning and oversight for developing in cooperation with institutions, the legislature, the governor and other concerned and interested parties effective goal statements for the system. The goals should specify the needs of the state for postsecondary education now and in the years to come.

The process of goal setting is vital to any effective system of accountability for without it, it is impossible to specify what one is accountable for. For this reason not only should there be as wide as possible participation in the process and as much relevant data on needs, trends and conditions made available to those involved in the process as possible, but the process should result if not in full consensus at least full understanding approaching consensus on what the goals should be. The development of consensus, involving as it must not only the educational but the political community, may be difficult to achieve. Broad involvement is even more important now than in the previous expansion period. The impact of conflicting public and institutional policies can be far more disruptive in a period of limited resources and leveling or decreasing enrollments than in an expanding period when room for accommodating conflicting policies is more likely to be present.

Further, in developing institutional and system goals there is far more danger in being too exclusive than in being too inclusive. This is why financial accountability cannot be considered alone but is integral to managerial accountability, programmatic and broader educational accountability, and even social accountability. Postsecondary education is both a social institution and a social process and as such is responsible for achieving social goals. Unlike fiscal audit which attests to the legality and solvency of fiscal operations, *financial accountability involves the relation of fiscal resources to achievement of*

*educational and social goals.* An institution or a system may be solvent but far from fulfilling its mission and the judgment may have to be made that it is not utilizing its funds effectively to achieve its goals. And these goals today include not only the internal well-being of the institution or system but how well and in what ways it serves the needs of the wider society. Postsecondary educational institutions have always served society but today the demand is for greater specification of how and in what ways.

Third, once goals at various levels are defined and planning and its implementation are under way, development of objective measures of achievement of the goals becomes crucial. The ability to develop such indices is related to the clarity and specificity of the goal statements themselves. It should be recognized at the outset that not all outcomes can be quantitatively measured. Some will yield nonquantitative descriptive progress reports. It is important that these not be overlooked and that the quantitative results be related to the descriptive results to produce a reasonable profile of progress or the lack of it. Financial accountability is quantitative, whereas not all programmatic accountability can be, but the expenditure of funds needs to be related to achievement of programmatic or educational goals. I am not prepared to specify what the indices should be, for these will be determined by the goals themselves. However, without such indices and standards to serve as the benchmarks of achievement neither planning nor goal setting constitute a system of accountability. Within such a system financial accountability is critical and it specifically involves the relation of budgeting to implementation of planning and goal achievement. The fourth factor in the development of an accountability system (in addition to planning, goal setting and the development of measures of goal achievement) is reporting to the governor, the legislature and the public on the effectiveness and efficiency in the operation and attainment of objectives by the system, the institutions and the program. One objective of an accountability system is to increase the confidence of the public about the relevance, effectiveness and integrity of the postsecondary educational system, in meeting the needs of citizens within the framework of public policy concerns. In other words institutions must show that, within the constraints of income, public interest and needs are being served well by postsecondary education. This may well mean that while the content of such reporting will be similar the form of reporting will have to vary with the segment of the public in question. How one reports in detail to the state budget officer, or the legislative budget analyst, may vary considerably from a general report to the governor or legislature or to the public through the media.

The question of reporting about the system raises the critical question of the perceived objectivity of the report. On this issue a statewide governing board may have more reason for concern than a statewide coordinating agency. The former tends to be viewed in some quarters as primarily the advocate for its institutions and its reporting is likely to be viewed as to some extent self-serving. A coordinating board is less likely to be so viewed. Legislative and gubernatorial

concern about bias towards higher education has led in some states to assignment of performance audit functions to non-educational legislatively or gubernatorially appointed audit agencies. To turn accountability determination and reporting over to such non-educational agencies, however, raises serious questions. Postsecondary education is highly complex and there is no assurance that such non-educational agencies either understand educational issues or how educational effectiveness can or should be measured. Too frequently such agencies are more concerned with efficiency than effectiveness and efficiency judged primarily by business rather than educational standards. Serious question can be raised about whether such external investigations do not further undermine institutional autonomy or integrity. However, in fiscal audit independent auditors are part of the accepted practice to insure objectivity and validity of audits. One solution for performance audits that has been suggested is the development of independent educational audit groups or agencies. Fred Harclerod has suggested that it would be possible to utilize accrediting agencies in the process.<sup>2</sup> If the state higher education agency is viewed as sufficiently objective, it may well be able to carry out performance review in cooperation with the institutions. However, whoever does the audits of performance, whether it be the state postsecondary agency or some other group, the procedures for review need to be clearly established, publicly known and accepted not only by the institutions and system but by the governor and legislature as well.

One further aspect of the concept of accountability including financial accountability is sometimes overlooked. If such accountability is appropriately developed, rather than being another form of state intervention and erosion of institutional flexibility and a further move towards centralization of management, in fact it may be the basis for increased institutional responsibility and decentralization of management decisions in relation to the use of funds to achieve objectives. The concept of accountability rests on the assumption that the unit held accountable is responsible and, given the specified goals or objectives, is free to reach those goals or objectives in the most effective ways within the resources available. *Accountability is a post-audit system, not a management control system.* It is to be contrasted with direct regulation. With regulation frequently goes responsibility for the regulator and the unit regulated is then not really accountable but directed.

Clearly financial accountability does not stand alone. It involves relating budgeting to planning, to goal setting, to program, performance and outcomes. Unless the statewide agency does relate budget requests to plans, goals and objectives, it has no criterion to demonstrate that funds have been used effectively in meeting educational needs. Without a performance-oriented accountability system, there is little way in which the institutions or the state agency can be held accountable for dealing with the critical issues facing

---

<sup>2</sup>Harclerod, Fred F., *Educational Auditing and Accountability*, Council on Postsecondary Accreditation, Washington, D.C., 1976.

postsecondary education in the period ahead. On the other hand, given clear institutional roles and scope and system objectives, and recognizing the connection of budgeting to program development or curtailment, specific decisions on fund management, personnel, and program support can and should be institutional responsibilities. Then the institutions can and should be held accountable for the use of funds in achieving their objectives and should be able to demonstrate how they have done so. While some institutions and state agencies have made major progress in this direction, in others there is still a long way to go.

On the statewide agency level, agencies will have to modify formulas to make them adaptable to variable enrollments, to conditions of decline, steady state and expansion all at once. It would be possible, in fact the temptation may be, to approach the issue by developing detailed budget control procedures at the state level, thus to centralize more budget and management controls. It will be more effective to leave detailed marginal cost analysis and management decisions to institutions and to develop relatively simple state budget procedures related to statewide objectives. John Folger<sup>3</sup> has suggested that formulas will need to put heavy weight on the fixed costs of operation, and deemphasize enrollment as the major determinant of funding without eliminating it entirely. This approach would give institutions more latitude to develop internal plans for matching resources to goals and would hold them accountable for carrying out their plans. What may be necessary, however, is more frequent revisions in institutional mission statements as well as statewide goals to meet the changing conditions.

To achieve financial accountability within an effective system of accountability a series of steps are necessary. First, financial goals must be established in relation to program goals within given resources available and plans developed for achieving them. Second, a system needs to be developed for reporting to the statewide agency and by the agency to the governor, legislature and general public accurate and reliable financial information which can be related to goals and accomplishments, by institutions and programs. Third, at the institutional level operating budgets need to be an integral part of academic planning and should reflect institutional interpretations of the resource requirements necessary to meet institutional roles and missions. On the statewide level, budgetary review should have as its frame of reference statewide plans and goals. Again, at the institutional level actual expenditures of funds by budget categories should be compared to planned expenditures to assess institutional performance and the impacts of differences between planned and actual expenditures. Fourth, operational data need to be more closely related to program data. Here, the National Center for Higher Education Management Systems' *Higher Education Finance Manual* can be particularly helpful. The *Higher Education Finance Manual* provides nationally accepted budget categories and uniform data definitions that can be used as a basis for comparable budget recommendations. Fifth, an effective tracking system that would provide fiscal

<sup>3</sup>Folger, John K., "Prospects for Higher Education Finance in the Next Decade," *Journal of Education Finance*, Fall 1977, p. 194.

information on a program basis at regular intervals during the planning and execution phases of the budget process should be an integral part of the reporting system. Finally, program cost information is often useful in assessing effectiveness and efficiency in achievement of educational missions as well as internal institutional management. Here the combined use of the NCHEMS *Higher Education Finance Manual* and the *Cost-Finding Principles Project* with the *Program Classification Structure* could be helpful.

Regardless, however, of the techniques utilized, what is crucial is the recognition that (1) financial accountability is related to program accountability, managerial accountability, and social accountability and does not stand alone, (2) planning and goal determination are essential conditions of any effective plan, (3) the program, institution, or system is responsible and has the ability to make decisions in relation to the achievement of objectives for which it can be held accountable and thus contrasts with imposition of direct management controls, and (4) the demand for accountability given the conditions of the 1980s is likely to increase rather than diminish. The danger is that accountability will be confused with central management control and that in the name of "accountability," institutional accountability will in fact be taken away. From this standpoint the challenge today, not just in relation to financial accountability but in relation to accountability in general, is to develop an effective system that reflects the unique character of postsecondary education rather than wait for more centralization of management controls whether this be through state postsecondary education agencies or more likely by the governor and the legislature.



## CHAPTER X

### FISCAL ACCOUNTABILITY: A REACTION

*Gary M. Munsinger*

Learning is our business in a university—learning on the part of students; learning on the part of faculty; learning on the part of citizens, in a nontraditional sense or through the role of public service. We do have a measurement problem since we cannot adequately define, qualitatively and quantitatively, what it is that we do. As a result, we have to look for surrogates; we have to look for other indicators.

In the field of business, from which I come, profit and loss figures provide "accountability." I used to think before I became involved in higher education administration that the problem in higher education was that it lacked something nice like a profit and loss statement to review at the end of the year. That really is not the problem. Our problem is that we very frequently fail to tie planning and budgeting decisions together. We have disjunction in resource allocation, on one hand, and resource development or attraction on the other. We need a nice system somewhere to pull them together. That system will be developed someday, and it will be a great contribution to government. It cannot be surpassed in importance; if we could somehow tie resource allocation and resource development decisions together, we would have made a tremendous contribution to higher education.

Members of a bank board on which I serve meet monthly and immediately turn to the second page of the report at the bottom line to find out how much money the bank made that month. First, we compare it to the budget as set out at the beginning of the year. Then we turn to revenues, deposits, and expenses. If revenue is up and we are over budget with respect to revenue, there are not very many complaints with respect to expense. We will accept that bank spending a little bit more money in terms of people, consultation services, data processing, and promotion if we are beating the budget with respect to revenue and if that bottom line is good. Unfortunately, in higher education we do not have that. That is why we need some kind of system to tie our resource allocation activities to our resource attraction activities. People in higher education institutions need a method for knowing where they are going to go, setting the objective beforehand. Following agreement that it is a worthwhile

objective, assess the resources available to you. Assess the opportunities for the application of those resources in reaching that objective and assess how well you attained the objective from some kind of system of information fed back to you. How well was the goal achieved? Was your particular program, your course of action effective? Also, then, you can tell whether you did it efficiently and whether you did or did not achieve the desired measure of productivity. But to repeat, we have one great problem: our real output is learning. Somehow, to fully measure and justify what it is that we do, we have to recognize differences in the efficiency of learning among institutions, among individuals, among disciplines. Someday that has to be solved, with a good surrogate—useful, simple indicators.

The members of our legislature, and I would suspect the legislature in every state, are very interested people. They would like to be informed. They would like to understand. They talk about accountability, but they want to understand. They want to do the right thing. When dealing with the legislature, the indicators, the surrogates, *have* to be, and have to remain, simple. Why? Because they are not experts in education. They are not experts in business. Bankers who go before a banking and insurance committee in the legislature face the same problems that we have when we go before an education committee. Our legislators are expected to act on seven hundred or more bills per year, and some bills are very, very complex. Citizen legislatures do a magnificent job with the support they have. They want to do well, but for us to succeed in this state, and I suspect in the other states, we have to establish our credibility. And, accountability is a part of that. For credibility, we have to do two things. First, we have to convince them that we use efficiently the resources that they make available to us. We have to convince them that a marginal dollar expended on higher education, for our programs, will be used efficiently. Number two, we have to convince them that higher education is important. Then they have to make a judgment as to whether or not that is more or less important than building a new prison, or two new prisons, or expending dollars in any number of ways. But let me emphasize, if they suspect that we are not efficient, they do not even come to that second question!

## CHAPTER XI

### "COSTING" IN THE PLANNING/BUDGETING PROCESS IN HIGHER EDUCATION

*Allan W. Barber*

An abundance, these days, of publications, speakers' presentations, models, and outpourings by public and private agencies of a consulting ilk eagerly tell us all "how to cost." We are told that because our program of "this-or-that" costs more than your program of "this-or-that" we must be inefficient or excessive in our use of resources. Depending on one's role as funder or fundee, cost data become tools to prove either "you" do not need any more funds, or "we" are underfunded.

Costing is basically very simple. Costing is a method of accounting which provides for assembling and recording all the elements of cost incurred to accomplish a purpose, to carry on an activity, or to produce or provide a unit of output. Two essential ingredients of costing are: (1) measures of resources utilized (usually expressed in monetary or funding terms), and (2) units of output or products resulting from the utilization of those resources. A relationship must be made between resources used and outputs produced in order to develop cost information—the resources used or consumed to produce or provide a unit of output.

$$\frac{\text{Resources Used}}{\text{Units of Output}} = \text{Cost Per Unit}$$

The salient characteristic of costing, then, is the association of cost to a unit of output. An oversimplified example of financial accounting and costing can be illustrated by referring to an institution of higher education which has a total operating budget of \$100 million and an enrollment of 20,000 students. The financial accounting would be expressed in terms of \$100 million for the institution or "X" million dollars for a specific department, or "X" million dollars for a specific function such as instruction, research, or physical plant. The accounting does not associate cost to something accomplished, but rather to a function or activity. Cost data, on the other hand, might be expressed as \$5,000 per student. Cost data might also be expressed as cost per credit hour or some other unit of output, although as we shall see later credit hours are proxies

for actual educational outputs. An assumption that a credit hour represents the same output as every other credit hour of the same nomenclature is not valid. The cost within a specific function like physical plant might be expressed as cost of maintenance per square foot of space.

Obviously, the more complex an organization the more complex is the costing. A single-purpose institution which is totally committed to teaching may derive meaningful cost information by dividing its total budget by total credit hours, or budgets of two, three, or more programs by the credit hours produced by each of the programs. Graduate research institutions have more complex problems, but the techniques are the same—allocating costs, direct and indirect, fixed and variable, to something accomplished. Mechanical techniques abound to do all this.

The point to which I am leading is that we have become so occupied with the mechanics of costing that we have lost sight of two basic problems which are seldom recognized in discussions and interpretations of cost information. Modelers, administrators, and budget officers glibly pronounce this and that conclusion as though fact in total disregard of these two problems, though to be sure one can find reference to them in the literature. We seem to assume that the more precise and accurate our costing models in determining whether an expenditure should be treated as direct or indirect the more useable is the information.

I want to turn our attention now to these two basic but obscured problems about cost information. The first problem is simply understanding costing. Many people attempt to use cost data in a variety of ways without understanding what the information represents. The second principle is understanding what it is that is being costed. These two principles are interrelated and a full understanding of either is hardly possible without a full understanding of both.

I have observed a top administrator at a large institution form opinions based on comparative costs without knowing whether the costs being compared are both full costs, or direct costs, or marginal costs. I am aware of one academic vice president who uses information derived from a full costing system, which segregates costs as direct and indirect, to plan which programs to reduce or eliminate in case of a budgetary reduction, or which programs to add if there are increases in budgetary levels of available resources. He is in for a big surprise when he learns that the full cost of a program will not disappear when he eliminates a program and that he must then make other cuts on a basis of trial and error until he discovers the actual program level at which he can continue to function within the reduced level of funding. He will be delighted to learn that he really will not need all the resources allocated to a new program based on information derived from a full costing system. In explaining all this to him, he responded that he would then use only the direct costs instead of the full costs in his decision-making process. Well, his experience will be more interesting

because without knowing how much of the direct costs are fixed or variable, he cannot know whether he will be over or under his available resources at the moment of truth. However, if he becomes persuaded from this experience that he needs marginal cost information for all future decision making, he will be in deep trouble when he attempts to determine needed levels of tuition and other revenues to fund the overall needs of his institution. His institutional needs will be shortchanged if he bases his computation of cost recoveries on marginal cost information; he will erode the base of fixed-cost support for all institutional programs and eventually strangle the vitality of the base of his institution.

I am frequently amazed when one administrator asks another—what is your overhead rate? If the latter's answer is less than that at the institution of the former, then a smile emerges because the questioner assumes his institution is recovering a greater proportion of costs. The latter becomes concerned and upon returning home calls his fiscal office to find out why his institution receives less overhead than the other institution. Of course, such is not necessarily the case. A cost is not inherently direct or indirect; a cost is treated as direct or indirect based on the judgment of the one doing the costing. I may treat and recover a cost as direct while someone else might treat and recover that same cost as indirect. Our indirect or overhead rates, therefore, would be different while we would be recovering the same total costs whether direct or indirect.

There is generally an unawareness of cost definitions. There are false assumptions about the preciseness and uniformity of cost determination methods and approaches. There is frequently a misunderstanding about the purposes for which cost information can be used. There are different needs for cost information and correspondingly different methodologies to develop information. Cost of this or that is not the same nor comparable to someone else's cost; it depends on the purpose and the methodology. Reference to "cost" is like reference to "vehicle." Full cost is as different from marginal cost as a bicycle from an automobile, though both the latter two represent transportation devices. Just as one could not compare the two without understanding the differences between them, one should not make decisions or arrive at conclusions without knowing the kind and application of cost which is being considered. No single costing methodology will satisfy all needs for cost information. Using cost information in decision making when one does not understand the kind of cost information needed or the purpose for which it is needed is not unlike playing Russian roulette.

There is misunderstanding about types of costs and the effects of costs which never appear in financial statements prepared in accordance with generally accepted accounting principles. Inflation costing is a popular subject now and absolutely essential in calculating replacement costs. There are other costs, such as imputed costs, which have a meaning, an essential meaning, in the effective planning for use of funds for capital expansion, yet imputed costs are not included in traditional budgets and cost reports. One cannot make an intelligent

decision in the use of accumulated unallocated fund balances without considering the effects of foregoing interest versus the effects of inflation. There are contrasting effects depending on whether funds which are generated for capital purposes are contributed, appropriated, or borrowed.

Cost behavior is another essential part of understanding cost information. NACUBO's Costing Standards Committee is doing some interesting work in this area, but generally higher education has not recognized the importance of determining how costs behave, and why. We are enamored with costing methodologies which tell us the direct cost and the indirect cost, while we have neglected the development of methodologies which tell us how costs will react to "What if" kinds of questions of how can we counter the effects of cost increases. We must first recognize and determine fixed and variable costs and understand how and why they behave as they do.

Another very important part of effectively using cost information is understanding that costs cannot be uniformly averaged to develop useful information unless the outputs are similar and provided uniformly. Developing average costs is basically a simple calculation. Examples of units which can be costed by an averaging technique include credit hours and degree programs, though I suspect not everyone would agree with this observation. If, on the other hand, outputs are dissimilar and not uniformly provided, then one must collect costs separately. The costing process is more complex and tedious. Research costs usually produce dissimilar outputs and should not be calculated as averages. Graduate instruction involving research activities present particularly difficult costing problems.

One of our most perplexing problems is determining unit costs in cases involving joint services and common costs. Joint services result simultaneously and costs are incurred commonly. An example is the cost of graduate education from which both teaching and research outputs result. Another example is the use of graduate students in public service institutes—an environmental design student developing a planning model for revitalizing a particular city's inner areas, for example. One is faced with outputs in graduate education that result from some costs which can be averaged but other costs between dissimilar outputs.

A typical relationship between a faculty member and a graduate student certainly involves instruction, but together they also do research. In effect, the ultimate result is a joint product, and it is almost impossible to allocate time and cost to "teaching" and "research" independently. The instruction and research functions are complementary in the sense that providing one results in providing the other. Research is an integral part of instruction, and vice versa. A project of a graduate student under the direction of a graduate faculty involving five hours credit may begin, proceed, and end uneventfully. Another project involving five hours credit may involve both the student and faculty member in unpredicted



reactions, even discoveries, which might result in twice the expenditures and time of the previous project. How much of the cost is for instruction; how much for research? Is the latter project to be judged to have been inefficiently pursued because it cost more than the former? Should the latter project have been constrained within boundaries established on the basis of allocated funds per credit hour?

I would now like to turn to another problem in costing which I mentioned earlier, and that is an understanding of what it is that we cost in higher education. As a background leading into this discussion, I believe it would be useful to describe a costing scenario in an industrial setting. It is useful to do this for two reasons: first, industry has developed a definite and proven decision-making process involving the use of cost information while higher education has not; and secondly, most of our lay constituents understand and believe in the industrial decision-making and costing processes. It is fairly simple to develop a hypothetical situation to illustrate the relationship between cost and output, sometimes called benefit, and the decision-making process where an organization's goals are geared to a clearly defined output having a clearly defined basis for measurement. In the private sector, output is measured in terms of profit, or in more colloquial terms—"the bottom line."

Company "A" determines that the current market indicates a growing demand for cars that emphasize fuel economy. Management develops possibilities for the production of a fuel-economy car. The alternatives are considered in terms of projected cost and anticipated selling price (benefit or output). A market projection might disclose the following (the example is intentionally simplified to consider the necessary considerations to make the point without unnecessary elaboration not related to the point):

| Model | Weight<br>Pounds | Average<br>MPG | Estimated Market<br>Prices and Units<br>That Consumers<br>Will Buy |            |         |           | Cost to Produce |  | Net Income |
|-------|------------------|----------------|--------------------------------------------------------------------|------------|---------|-----------|-----------------|--|------------|
|       |                  |                | Units                                                              | Unit Price | Units   | Unit Cost |                 |  |            |
|       |                  |                |                                                                    |            |         |           |                 |  |            |
| A     | 3,000            | 14             | 100,000                                                            | \$4,000    | 100,000 | \$3,400   | \$60 Million    |  |            |
| B     | 2,600            | 18             | 120,000                                                            | 3,800      | 120,000 | 3,200     | 72 Million      |  |            |
| C     | 2,450            | 20             | 130,000                                                            | 3,700      | 130,000 | 3,100     | 78 Million      |  |            |
| D     | 2,100            | 22             | 131,000                                                            | 3,500      | 131,000 | 3,000     | 65.5 Million    |  |            |

The alternative choice for the management of Company "A" is obvious; Model "C" will be selected for production for the next year. The *planning* (market studies, product costs of material, labor, and overhead, and so forth) leads to *programming* for the production of Model "C" expressed in financial terms as a *budget*. During the operating period, costs are controlled by unit of output according to the budget of cost per unit of output, and at the end of the

operating year the results of the production are evaluated according to the plan and the budget. If the evaluation shows that the planning did not accurately project the market or the costs, then the program will be adjusted accordingly. It took Ford Motor Company but little time to decide to discontinue the Edsel as a result of the measurement of the results of operations against the planning. This scenario indicates the same general approach that is being suggested for higher education—relating funding needs to a relationship between cost and benefit.

In view of evolving conditions, involving interpretations of higher education's mission of mass education and of the increasing dependence on limited public resources, a serious movement began a decade or so ago to utilize costing as a basis for allocating resources for higher education. Rational concepts which utilize costing in the private sector for planning and budgeting were suggested as a basis for decision making in higher education, much in step with the introduction of the Planning, Programming, and Budgeting System (PPBS) into the federal government by President John F. Kennedy and Secretary of Defense Robert McNamara in 1962. It was a concept developed by McNamara and Charles Hitch based on their experiences in solving management problems at Ford Motor Company.

PPBS embodies many of the decision-making processes used in industry, including costing, systems analysis, and cost-benefit relationships. The processes follow traditional practices which are pointed to more and more by public decision makers as a way "to make education more efficient." The concepts of PPBS are embodied in Management By Objective (MBO) and the current buzz-term, Zero-Base Budgeting (ZBB), introduced by President Carter as the way to make appropriation decisions in the federal government. The basic concepts and circumstances surrounding PPBS define quite well the general thesis underlying the process of relating costs to benefits and the concepts of evaluation and selection of alternative courses of action.

PPBS, ZBB, and MBO are rational approaches to decision making in which allocations of funds are made to programs based on measures of efficiency, as determined through cost and systems analyses. In systems analyses, a model identifies cost of each alternative program and the benefit or extent of achieving the desired objective resulting from the program. This kind of information is commonly known as cost-benefit or cost-effectiveness analysis or study. All other factors being equal, one would compare the costs and benefits of each alternative and then select the alternative approach which will achieve the desired objective at the least cost. The thread which can be traced through the rationality of PPBS, ZBB, MBO, and later in management systems developed by NCHEMS and others is the relationship between cost and benefit.

The Education Amendments Act of 1972 established the National Commission on the Financing of Postsecondary Education, appointed by the President and Congress. The Commission Report suggests national uniform

standard procedures for determining annual per-student costs, implying that all credit hours are the same and that the principles of industrial costing can be legitimately transferred to decision-making processes establishing funding needs to provide outputs of higher education. Lyman Glenny's observation almost two decades ago is no less true today:

Most coordinating and governing agencies tend to treat courses and programs of similar levels in an equal manner regardless of the type of institution.<sup>1</sup>

The point should now be clearly made that there is a strong penchant by federal and state governments to find a way to measure the benefits, or effectiveness, or outcomes as a basis for determining allocations of funds to institutions of higher education. The mechanism suggested to relate achievements to needs for resources is costing, and the relationship is popularly known as a cost/benefit or cost/effectiveness relationship.

The motives of governmental executives and legislators are certainly well intended, particularly in view of the scarcity of resources which has only recently reached critical proportions, and indeed it is difficult to argue against the position that some fair and effective basis must be found by which governmental funds are to be allocated among the rapidly escalating needs of society.

A relationship between the need for funds and the benefits of outputs certainly sounds plausible, but before becoming lost in costing mechanics, let us consider again the second problem identified earlier—what are we costing? What are the benefits? What are the outputs? Before judging requests for funding on a basis of efficiency, let us be careful to quantify our benefits if we are to compare outputs. Let us define efficiency in terms of benefits and not countable credit hours which are frequently assumed to be educational outputs.

When one attempts to define benefits in higher education, one cannot escape dealing with "values." The element of "value," undefinable "value," is the basis for making many decisions about academic programs in higher education. Costing provides information to use in selecting the most efficient alternative. Based on costing, a decision might be reached to discontinue Greek philosophy, to assign standard teaching loads, or to assign faculty a specific time to "do research." Basic chemistry might be considered more efficiently taught at one school because its cost is less than basic chemistry at another school, and on that basis a legislature might decide to reduce funding to the latter. The cost of teaching English might be higher at one institution because there are more students who are less prepared than at another institution. Does this mean that the latter is more efficient or that the former is being wasteful and should

---

<sup>1</sup> Lyman A. Glenny, *Autonomy of Public Colleges: The Challenge of Coordination* (New York: McGraw-Hill, 1959).

receive a reduction in appropriation? A college of veterinary medicine may have expended twice as much to discover a cure for an animal disease than the college of agriculture spends to cure a plant disease. Which is more efficient? How many discoveries have been made by accident which might never have occurred if time had been scheduled "efficiently"?

By its nature, research cannot be calculated as a predefined cost of a learning experience. Research involves inquiry, hopefully the discovery of new knowledge, and, in many cases, the use of that new knowledge in solving a wide range of problems. Researchers may spend a million dollars resulting in no new knowledge, but one cannot say that the seemingly sterile efforts will not be important in later discoveries. Many discoveries result from building upon the failures of previous research. Was the previous research then a failure and an "inefficient" use of funds? A research project in which a graduate student learns under the direction of a teacher may begin, proceed, and end uneventfully. Another project may result in unpredicted reactions and therefore cost much more to pursue than the former. Is the former efficient and the latter inefficient?

One cannot determine the optimum level of research on the basis of an engineering standard as in the case of a process of manufacturing automobiles. Research varies in scope, effort, and cost, based on a combination of factors which occurs differently for each project. Therefore, if research is important in the learning experience, there are implications about evaluating teaching outputs on the basis of costs, including the attendant judgments of efficient or inefficient uses of funds.

If outputs could be somehow quantified, there would be a problem in making judgments based on the cost data. For example, if it were possible to define the level of competence that a student should have achieved at the end of a particular English course, it might cost Harvard University half as much as it costs another university because the student who enters Harvard may require much less faculty attention. Does this mean that Harvard is more efficient? Does it mean the other university is less productive? Should the educational goals of both institutions be the same, and should they be evaluated on the basis of comparable costs for the same courses?

It is fairly clear that costs are important to decision makers in the manufacture of an automobile unit as described earlier, for the product is clearly and completely quantifiable (so many pounds of steel, glass, paint, aluminum, and other materials). The inputs are clearly definable and homogeneous (a pound of raw steel is the same as another pound of raw steel of equal grade—which is measurable and can be valued according to an established market), and the processes are clearly measurable and predictable (raw steel of a given grade can be molded at a certain temperature which is known, and the process can be costed according to furnace capacities and fuel costs). The

question is whether or not costing can be used in the planning for education where the products are not all alike, and where neither inputs nor outputs are currently quantifiable. The inputs do not all react according to predefined measurements—indeed, the effect of the learning process can be expected to be different for each student and each research project, and the process cannot be planned according to engineering standards—one student might require more time and expense than another, unlike two pieces of metal which will react alike in a predefined process.

An automobile unit can be compared with a unit produced by another manufacturer—a Ford can be compared to a Chevrolet or a Cadillac—and an evaluation made if it costs more or less to produce a Chevrolet or a Cadillac. All that is really known about higher education is the input, the costs. Therefore, to compare degree programs between institutions becomes a cost-to-cost comparison while benefits remain unquantified. Not only is the output of higher education unquantified, there is as yet no consensus as to the criteria to be used to define a quantification. Unlike comparing the benefit of a Ford to a Chevrolet or Cadillac in a cost/benefit relationship, there is no agreement as to the benefit in comparing the value of an artist with the value of a physicist, or an accountant to an educator, or an economist to a lawyer. There is not even a generally accepted measurement to be used in comparing a law graduate from one university to a law graduate from another university; they certainly do not cost the same.

In response to legislative requests for bases on which to make appropriations of funds to higher education, modelers, budget and cost analysts, and legislative staffs have done much to develop the mechanics of costing. Ironically, academicians and academic administrators have made few positive contributions to respond to the needs of appropriators while the costing models are being developed by modelers and analyzers. However, from time to time questions are raised by academic spokespersons as to the appropriateness of costing in the academic environment of higher education. It is ironic because those who are really qualified to respond to legislative needs are strangely silent while technicians construct fences circumscribing the potential of the academic community to go beyond the classroom into the frontiers of new knowledge. What are the views and perceptions of those who are academic but who understand the realities of scarce resources in a competitive society concerning the use of costing as a basis for planning/budgeting—and what are the implications of using cost as a basis for planning/budgeting in higher education? To answer this and related questions concerned with the appropriateness of using costing in the planning/budgeting process in higher education, I prepared a study earlier this year which included a survey of a cross section of academic administrators at selected state research universities. The survey included a questionnaire addressed to presidents or chancellors; academic vice presidents, or their counterparts; and research vice presidents, or their counterparts. The emphasis of the survey was on the appropriateness of costing in

planning/budgeting in higher education, and not the mechanics of how to do costing. The academic perspective was sought from administrators because of the vantage points of their backgrounds as academicians and their position as administrators who confront the reality of resources which often are far less than needed to pursue all the legitimate programs of higher education. The academic response was couched in a perspective of experience and entrepreneurship of what higher education is all about as contrasted with a perspective of an analyzer or modeler. The fruits of analysis and modeling are already a matter of prolific publication which serve unfortunately too often as a basis for many legislators and administrators demanding an allocation of funds based on cost comparisons. The special quality of this study was to give exposure to the views of those who understand, or should understand, the substance of that which is affected by allocation decisions—higher education programs. The survey was developed to probe questions which are not being asked nor adequately considered in the growing tendency of legislators and other funding sponsors to use raw cost data as a basis for appropriating funds.

Survey questionnaires were mailed to 45 individuals representing large state research universities of which 35 responses, or 78%, were returned. The institutions were selected because of their importance as a major grouping of research universities throughout the several states.

The response rate was as follows:

TABLE 1  
Number of Survey Questionnaires Mailed and Responses Returned

| To                                                 | Questionnaires<br>Mailed | Responses<br>Returned | Percent<br>Returned |
|----------------------------------------------------|--------------------------|-----------------------|---------------------|
| Presidents and<br>Chancellors                      | 31                       | 21                    | 68%                 |
| Academic Vice Presidents, or<br>Their Counterparts | 6                        | 6                     | 100                 |
| Research Vice Presidents, or<br>Their Counterparts | 5                        | 5                     | 100                 |
| Other                                              | 3                        | 3                     | 100                 |
| Total                                              | 45                       | 35                    | 78%                 |

Respondents represent major state research universities located throughout the nation, 22 from institutions east of the Mississippi River and 13 from institutions west of the Mississippi River. Respondents represent major research institutions in 26 states: 1 in each of 19 states; 2 in each of 5 states; and 3 in



each of 2 states. Over half the respondents represent institutions having enrollments of more than 20,000 students and total state appropriations exceeding \$75 million. Of course, their total budgets would encompass much larger amounts including internally generated revenue and sponsored contracts and grants. At my institution, for example, the state appropriation represents approximately half the total budget. The survey instrument included 32 questions; unfortunately, time will not permit me to discuss each of the questions and responses.

Therefore, I shall attempt to report the results of the overall survey by referring specifically to a few of the questions and in general to the overall flavor of the responses. Interestingly, the consensus of the responses from each grouping is very much the same as the consensus of responses from the other grouping; so much so, as a matter of fact, that one tends to arrive at the same conclusions by considering the consensus of either grouping or the total of both without distinguishing between the two.

The thrust of the question posed in Table 2 is to inquire into the nature of the process of learning. Table 2 shows that the respondents are in clear agreement that each student represents a unique quality and a unique process, and unlike the production of automobiles, for example, neither the process nor the product (student) should be expected to be uniform nor average. While academic programs may have inputs such as facility and physical plant costs which are common to all students, each student is himself/herself a unique quality at the beginning of the process, during the process, and at the end of the process.

Having established that in the opinion of the great majority of the respondents each student represents a unique quality which responds differently to educational processes, the next question to be considered is the validity of conclusions regarding the value or the cost of the process of education for either a single student or a group of students. The responses shown in Table 3 indicate emphatically that for whatever purpose costs of educational processes may be used, cost is not a valid basis for comparing the value of outputs designated "degree programs" between institutions.

The respondents are virtually unanimous in their opinions that valid conclusions cannot be drawn from comparing outputs or the costs of outputs between institutions. But can institutions be diversified and still be expected to be measurable as efficient or inefficient based on comparisons of cost? The question posed in Table 4 seeks responses of whether or not diversification is important in the role of institutions of higher education. The respondents left no doubt, as indicated in Table 4, that diversification is important in the role of institutions of higher education.

TABLE 2

Do respective degree programs of institutions accomplish approximately the same educational processes for the students of each—beginning with the entrance of students through to the completion of degree requirements by students, or does each student represent a unique quantity which responds differently to educational processes, is affected differently, and receives a different level of value both to himself/herself and to society?

| Responses                                  | Same<br>Processes | %    | Unique<br>Processes | %    | Mixed<br>Response | %    | No<br>Answer | %   |
|--------------------------------------------|-------------------|------|---------------------|------|-------------------|------|--------------|-----|
| Presidents and<br>Chancellors              | 2                 | (10) | 16                  | (76) | 2                 | (10) | 1            | (4) |
| Academic and<br>Research<br>Administrators | 2                 | (14) | 10                  | (72) | 2                 | (14) | 0            | (0) |
| Total                                      | 4                 | (11) | 26                  | (75) | 4                 | (11) | 1            | (3) |

TABLE 3

Can the value of a particular degree program at one institution be compared with the value of similarly designated degree programs at other institutions on the basis of the cost of each?

| Responses                            | Yes | %    | No | %    | No Answer | %   |
|--------------------------------------|-----|------|----|------|-----------|-----|
| Presidents and Chancellors           | 0   | ( 0) | 20 | (95) | 1         | (5) |
| Academic and Research Administrators | 2   | (14) | 12 | (86) | 0         | (0) |
| Total                                | 2   | ( 6) | 32 | (91) | 1         | (3) |

TABLE 4

Is diversification important to the role of institutions of higher education?

| Responses                            | Yes | %     | No | %   | No Answer | %    |
|--------------------------------------|-----|-------|----|-----|-----------|------|
| Presidents and Chancellors           | 21  | (100) | 0  | (0) | 0         | ( 0) |
| Academic and Research Administrators | 12  | ( 86) | 0  | (0) | 2         | (14) |
| Total                                | 33  | ( 94) | 0  | (0) | 2         | ( 6) |

If the question appears to be elementary, the implication of the answer is not. Is it possible to have comparability and uniform measures of quality and cost of output if the process is characterized by diversification? Or to put it another way, if one transportation process produces Cadillacs and one transportation process produces bicycles, how can the quality and cost of the outputs of each be related if the outputs are not quantified?

The survey probed the significance of research to teaching. One cannot determine the optimum level of research on the basis of an engineering standard as in the case of a process of manufacturing automobiles. Therefore, if research is important in the learning experience, there are implications about evaluating teaching outputs on the basis of costs, including the attendant judgments of efficient or inefficient uses of funds.

The respondents are unanimous in their answers that research is an important component in the teaching function of a research university as shown in Table 5. There were no qualifications or conditions; there was complete agreement.

TABLE 5

Is research an important component in the teaching function of a public research university?

| Responses                            | Yes | %     | No | %   |
|--------------------------------------|-----|-------|----|-----|
| Presidents and Chancellors           | 21  | (100) | 0  | (0) |
| Academic and Research Administrators | 14  | (100) | 0  | (0) |
| Total                                | 35  | (100) | 0  | (0) |

Having established that in the opinion of the respondents research is an important component of teaching, an important question bearing on the validity of cost as a basis for planning/budgeting is whether the cost of research is a predictable constant or an unpredictable variable as a component of the teaching function. If it is constant, then the cost thereof can be expected to be uniformly or consistently computed. If it varies, then its role and its cost would not be subject to consistency of evaluation on a common yardstick of measurement. The respondents indicate in Table 6 that in their opinions the cost of research is a variable as a component of the teaching function.

One of the respondents who answered "Constant" commented that he did not like the question—that research can be constant or variable, depending upon the circumstances. Another respondent answered that research can be constant except in contract research. The responses are profound in their implication. An unpredictable variable in the cost of a process greatly weakens a basis for judging a need for funds based on such conventional measures as quarter credit hours, degrees awarded, or student enrollments.

Research introduces a formidable problem in a consideration of the use of costing in the planning/budgeting process in higher education. The data established that in the opinion of the respondents research is an important component of teaching, and that it is also important as an activity unrelated to teaching. A problem arises, therefore, as to how to allocate the benefit of research activities and the cost of research activities between teaching outputs and research outputs. It is certainly meaningless to relate costs without a knowledge of benefits, so both relationships would have to be quantified. Even discounting the problem of quantifying teaching outputs by accepting for this purpose such proxies as degrees or credit hours, the problem escapes solution.

TABLE 6

If the answer to 9 is Yes, is the cost of research a predictable constant or an unpredictable variable as a component of the teaching function?

| Responses                                  | Constant | %    | Variable | %    | Mixed Response | %   | No Answer | %   |
|--------------------------------------------|----------|------|----------|------|----------------|-----|-----------|-----|
| Presidents and<br>Chancellors              | 1        | ( 5) | 19       | (90) | 0              | (0) | 1         | (5) |
| Academic and<br>Research<br>Administrators | 2        | (14) | 11       | (79) | 1              | (7) | 0         | (0) |
| Total                                      | 3        | ( 9) | 30       | (85) | 1              | (3) | 1         | (3) |

Table 7 shows that the respondents do not believe that there is a rational and uniform basis for allocating the expense of research between teaching and research.

TABLE 7

Is there a rational and uniform basis for allocating the expense of research between the teaching function of involved graduate students and the objective of the research project?

| Responses                                  | Yes | %    | No | %    | Mixed  |     | No     |      |
|--------------------------------------------|-----|------|----|------|--------|-----|--------|------|
|                                            |     |      |    |      | Yes/No | %   | Answer | %    |
| Presidents and<br>Chancellors              | 4   | (19) | 15 | (71) | 0      | (0) | 2      | (10) |
| Academic and<br>Research<br>Administrators | 3   | (22) | 9  | (64) | 1      | (7) | 1      | ( 7) |
| Total                                      | 7   | (20) | 24 | (69) | 1      | (3) | 3      | ( 8) |

Three "yes" answers were accompanied by qualifications which are significant enough to question the position of affirmation:

- Rational—perhaps; not uniform.
- But not with absolute accuracy.
- Graduate students represent a pool of informed and capable laborers; the involvement with research provides useful knowledge for teaching.

The problem of allocating cost between teaching and research compounds the problems determined earlier involving the variability of the cost of research and the uniqueness of each of the products, or outputs, of higher education. The problem of quantifying output and then determining the effectiveness and value of the output is an underlying problem of measuring the most effective basis for allocating inputs.

Earlier, respondents answered that the cost of research is a variable in the learning experience. A related question identifies an example in which costs increase without a corresponding increase in credit hours, and then asks the respondents if the example implies a decrease in efficiency in the use of funds. As shown in Table 8, the respondents agree that the cost increase does not mean a decrease in efficiency.



TABLE 8

Would the effect of adding a prominent research faculty member, or expense which would not result in an increase in credit hours generated, be an indication of a decrease in efficiency from one year to the next?

| Responses                               | Yes | %    | No | %    | Mixed  |      |
|-----------------------------------------|-----|------|----|------|--------|------|
|                                         |     |      |    |      | Yes/No | %    |
| Presidents and Chancellors              | 1   | ( 5) | 18 | (85) | 2      | (10) |
| Academic and Research<br>Administrators | 2   | (14) | 12 | (86) | 0      | ( 0) |
| Total                                   | 3   | ( 8) | 30 | (86) | 2      | ( 6) |

In answering "yes," one respondent indicated that although the dollar efficiency would drop, the quality might well increase. One might conclude from this comment that efficiency is not relatable to quality—at least efficiency measured in terms of dollars and quality measured in terms other than dollars. This observation would seem to point to a distinct factor which simply is not provided in traditional concepts of cost/benefit analyses.

Three very significant ingredients of the cost of instruction are: (a) faculty/student ratio; (b) class size; and (c) mix of professor/associate professor/assistant professor/instructor. An observation by a respondent to a survey question regarding whether or not an increase in cost implies a decrease in efficiency was that while efficiency might drop, quality might increase. The respondent's comment obviously implies that cost is not a valid indicator of the need for resources. This observation is an extremely important consideration in reviewing the three ingredients of the cost of instruction.

The three factors affecting the cost of an instructional program fit well into a consideration of efficiency, and quality. An institution can double its efficiency, measured solely in terms of costs, quite easily by doubling the class size, or doubling the student/faculty ratio, or using only graduate assistants in all phases of instruction. It would appear that graduate research institutions are inherently inefficient in teaching courses which are also taught by senior level institutions—institutions which have little or no research cost to allocate to the cost of teaching. Therefore, a question arises as to whether there are ways to determine effective ratios between students and faculty; and if so, could the ratios be applicable as standards for all institutions. The survey sought answers to these questions, and the answers are clear as indicated in Table 9.

TABLE 9

Is there any uniform basis for determining the most effective faculty/student ratio in teaching, most effective class size, or most effective mix of professors, associate professors, assistant professors, instructors, or graduate assistants in teaching?

| Responses                            | Yes | %    | No | %    |
|--------------------------------------|-----|------|----|------|
| Presidents and Chancellors           |     |      |    |      |
| Faculty/Student Ratio                | 2   | (10) | 19 | (90) |
| Class Size                           | 2   | (10) | 19 | (90) |
| Effective Mix of Instructors         | 2   | (10) | 19 | (90) |
| Academic and Research Administrators |     |      |    |      |
| Faculty/Student Ratio                | 2   | (14) | 12 | (86) |
| Class Size                           | 1   | ( 7) | 13 | (93) |
| Effective Mix of Instructors         | 3   | (21) | 11 | (79) |
| Total Responses                      |     |      |    |      |
| Faculty/Student Ratio                | 4   | (11) | 31 | (89) |
| Class Size                           | 3   | ( 9) | 32 | (91) |
| Effective Mix of Instructors         | 5   | (14) | 30 | (86) |

While Table 9 indicates a preponderance of opinion that there is not a uniform basis for determining the most effective faculty/student ratio, effective class size or effective mix of instructors, 14 percent of the respondents answered the last proposition affirmatively.

It is not enough to say that costing is or is not applicable in the planning/budgeting process in higher education and, therefore, it (costing) can or cannot be done. This study seeks to learn whether or not there is a legitimacy to the views of many that allocations of funds based on costs should be related to benefits. The survey posed two related questions as indicated in Tables 10 and 11.

TABLE 10

In your opinion, is it desirable to relate the cost of an educational program to the benefit derived therefrom?

| Responses                               | Yes | %    | No | %    | Mixed<br>Yes/No | %   |
|-----------------------------------------|-----|------|----|------|-----------------|-----|
| Presidents and Chancellors              | 15  | (71) | 5  | (24) | 1               | (5) |
| Academic and Research<br>Administrators | 10  | (71) | 4  | (29) | 0               | (0) |
| Total                                   | 25  | (71) | 9  | (26) | 1               | (3) |

The comments accompanying "yes" responses indicate frustrations, however, which cloud the meaning of the consensus of response:

- But cautiously, not that relationship is valid as a sole means of reaching allocation decisions nor of measuring quality, productivity, or of efficiency.
- But how does one define benefit?
- Desirable, but measurement problems preclude such efforts. One must consider and measure the value to the individual and the value to society.
- But benefit suggests value which is really not measurable.

TABLE 11

Do you agree that legislatures are justified in seeking an effective way to determine allocations of public funds to higher education in view of increasing competition with other public needs and the scarcity of resources?

| Responses                            | Yes | %    | No | %   |
|--------------------------------------|-----|------|----|-----|
| Presidents and Chancellors           | 20  | (95) | 1  | (5) |
| Academic and Research Administrators | 13  | (93) | 1  | (7) |
| Total                                | 33  | (94) | 2  | (6) |

Comments accompanying the responses include the following:

- The [legislators] are justified in seeking a rationale for having confidence that public funds are being administered wisely.
- An effective way to understand how such allocations are made and why and with what results—but not to line-item or formula system.
- "A" formula is too easy. The legislature must make hard decisions on the importance of education in comparison with other programs.
- This is ultimately a political judgment. Only a fool would try to develop a formula which would compare the needs of education with, for example, welfare.

The survey requested consideration for a uniform basis of allocating funds among institutions by asking the question posed in Table 12.

TABLE 12

Is it reasonable to expect that the most beneficial basis for allocating funding among academic programs will be the same at all institutions?

| Responses                            | Yes | %    | No | %     |
|--------------------------------------|-----|------|----|-------|
| Presidents and Chancellors           | 3   | (14) | 18 | (86)  |
| Academic and Research Administrators | 0   | (0)  | 14 | (100) |
| Total                                | 3   | (9)  | 32 | (91)  |

The responses indicate a clear consensus. What would be the effect on teaching and research if all states adopted a uniform basis? This question is the subject of Table 13.

The responses indicate clearly a negative effect. The two responses which contained an indication of at least some positive effects might well have been characterized as negative as indicated by the accompanying comments:

- The poor programs would improve and the better programs would decline.
- Lower financed institutions would get an uplift but better ones would be averaged down.

Interestingly, and independently, several respondents used the same expressions to describe the negative effects. The following summary of responses (more than one response may be attributable to one respondent) indicates the flavor of response:

- Four respondents referred to a negative effect on *excellence*—disappearance or elimination thereof.
- Six respondents referred to a state of *mediocrity*—common, uniform, mass, and universal.
- Six respondents used the word *disaster* or *disastrous*.
- Five respondents referred to a lowering of *quality*.
- Two respondents referred to a *lowest common denominator*.
- Three respondents referred to a *waste* of resources inasmuch as all institutions do not have the same mission or the same circumstances.

TABLE 13

What would be the effect on teaching and research in public state research institutions of higher education if all states adopted the same uniform basis of allocating funds (for example, if all states appropriated the same amount for each projected Chemistry degree program, or each projected credit hour to be taught by each department listed in the HEGIS Taxonomy)?

| Responses                                  | Negative<br>Effect | %    | Mixed<br>Negative/<br>Positive<br>Effects | %    | Answer<br>Indefinite<br>or No<br>Answer | %    | No<br>Effect | %   |
|--------------------------------------------|--------------------|------|-------------------------------------------|------|-----------------------------------------|------|--------------|-----|
| Presidents and<br>Chancellors              | 15                 | (71) | 2                                         | (10) | 3                                       | (14) | 1            | (5) |
| Academic and<br>Research<br>Administrators | 10                 | (71) | 0                                         | (0)  | 4                                       | (29) | 0            | (0) |
| Total                                      | 25                 | (71) | 2                                         | (6)  | 7                                       | (20) | 1            | (3) |



- Other descriptions include a diminishing effect on research, debilitating homogenization, and stifling of creativity and innovation.

The respondents acknowledge a justification on the part of legislators who seek effective ways to determine effective allocations of public funds, as shown in Table 11. In no way do they diminish their strong and united opinion, however, that allocations of funds, based on uniform standards or an assumption that cost is a valid measure of effectiveness, will have a disastrous effect on the character of higher education.

In summary, then, the respondents agree that cost is not a valid basis, certainly not by itself, on which to measure the effectiveness of the use of resources by institutions of higher education. Furthermore, the respondents agree that important characteristics of the teaching function are diversity and research, both of which represent variables not subject to predetermination or constant or uniform application, either in effect or in cost. Therefore, not only is cost not a valid indicator of the effectiveness of the use of resources according to common standards of measurement, it will in fact vary in different situations and, therefore, cannot be expected to represent a constant or uniform basis for comparison between programs of institutions.

The conclusions from the survey, accounts of experiences with actual modeling of costing systems in institutional environments, and a host of miscellaneous interviews, meetings, and participation in professional associations by the author can be stated concisely:

1. A valid basis for determining needs in the planning/budgeting process in higher education has not yet been developed. Costing is not by itself a valid basis for determining needs and allocations of funding. It is inherently an indicator of efficiency which is valid in measuring the effectiveness of the use of funds in the production of units of output which are alike, comparable, and average; the cost per unit of output, therefore, can be expected to be alike, comparable, and average. If programs of institutions were like automobile units, it would be valid to judge differences in costs as valid indications of efficiency or inefficiency. Costs which are comparable and average will result in outputs, which are comparable and average. Therefore, costing is a tool of destruction of quality of academic programs which is dependent on such variables as diversification, research, service, as well as teaching competencies.

Three formidable stumbling blocks to the effective use of costing as a basis for planning/budgeting are:

- The problem of quantifying outputs and therefore the impossibility of developing a valid cost/benefit relationship, without which there is no measure of whether a cost is reasonable or excessive.

- The problem of assigning elements of the cost of research between teaching, research, and other recipients of benefits.
- The problem of assuming that such proxies as credit hours and degrees are outputs and therefore valid measures of academic contributions. (Of course, they are not.)

2. The great strengths of higher education include diversity, freedom to develop new knowledge, and an ability to innovate. These strengths are greatly threatened by current interpretations of the meaning of costs developed by analyzers, modelers, and government budget staffs. The assumption that the most effective basis for appropriating funds is a uniform statewide or nationwide plan portends general and uniform mediocrity—described by some as “disastrous.”

3. Legislators and other funding sponsors have a legitimate justification in seeking an effective way, a methodological basis, to determine effective allocations of public funds for higher education. It is folly to argue that legislators and other lay persons have no legitimate basis for requiring academia to justify requests for funding according to a plan and in relationship to the benefits to individuals and society.

4. There is a definite need for a methodology to assist decision makers in determining effective levels of funding in the planning/budgeting process in higher education. The nation's resources are scarce, far exceeded by its needs, and it simply is not reasonable to argue that legislators and other sponsors either will or can, in the face of intense competition for public resources, appropriate funds based on traditional measures of subjectivity, opinion, or emotion. Costing methodologies will be developed and will be used ultimately as a part of the planning/budgeting and appropriation processes.

5. There is a critical need for research and other contributions from the academic community to establish a proper context for costing in the planning/budgeting process for, and leadership in responding to, legitimate needs of legislators and other sponsors in their search for a way to fairly and effectively appropriate funds and evaluate programs. A defensive posture by the academic community and failure to respond to the problems of planning/budgeting scarce resources among competing programs will result in a reliance by legislative decision makers on costing models developed by analyzers and budget staffs knowledgeable in technical ways of relating dollars to proxies for educational values of academic programs. The analyzers and modelers readily agree that quantification of output is a problem and that a meaningful treatment of research costs has yet to be developed, but they continue to build models, and budget staffs continue to recommend formulas as though these problems do not exist. The costing models will not, in all probability, be concerned with substance or quality. If the conclusions of this study are correct, the results will

be sameness, mediocrity, retardation of excellence, and shallow research in higher education.

If diversification, innovation, and ability to develop quality are to continue as characteristics of higher education programs, especially in major research universities, there must be contributions by those who understand academic life to establish a valid context within which objectively identified bounds can be applied in the appropriation process. Proxies which account for performance with nondistinguishing uniformity are no measure of quality nor of the effectiveness of particular levels of funding. There must be research; there must be contributions to the literature; there must be a sense of realism of the ways appropriation decisions are made in the legislative political process; and then there must be action in the political arena to establish academic needs for teaching, research, and service programs as the basis for appropriation requests. Research in scholarly journals and committee reports within institutional walls will not do it—action must be translated into legislative calls. If there are to be alternatives to costing as a basis underlying the planning/budgeting process in higher education, it would seem that it will have to come from academia if it is to be valid—otherwise, the costs of proxies will prevail as the basis for funding academic programs, and uniformity and mediocrity, the companions of costing, will characterize institutions of the future.

Diversity or uniformity? Creativity and inquiry or rigidity and sameness? Excellence or mediocrity? Vitality or disaster? Formulas and costing or \_\_\_\_\_? If an alternative is not developed by academia and accepted by legislators and sponsors, costing developed by analyzers, modelers, and budget staffs will determine the answer.

## CHAPTER XII

### FINANCING POSTSECONDARY EDUCATION IN THE '80s: A GOVERNOR'S PERSPECTIVE

*Robert F. Bennett*

Challenges exist and may become exacerbated as we move toward and into the '80s in the area of higher education, and for that matter in all areas of government. Every individual who runs for public office or depends upon the public coffers for a paycheck is concerned about Proposition 13. This concern is not so much how it might work in their city or state but what type of fever or philosophy these types of activities actually represent. In higher education it is appropriate for all who are involved, either as its servants or its beneficiaries, to become concerned about Proposition 13 fever, as it may affect the future of higher education in their respective states and in their respective institutions.

First, we must understand what it represents and thereby what it portends for higher education or for any other area of government service. The so-called Proposition 13 fever is nothing more or less than the deep disenchantment of the public with governmental institutions that control, restrain and restrict their daily lives and feed off of their taxes, in their opinion, unnecessarily. In the last several months I, and governors like me in all of the 50 states, have been out talking to their citizens and quite frequently we ask this question, "How many of you think you are not paying enough taxes?" Well, as you might imagine few if any dared hold up their hands. When you ask, "How many of you feel that you are paying just the right amount?" few if any hold up their hands. But when you ask, "How many of you feel that you are paying far too much?" it is nearly unanimous. Everyone agrees that they're paying too much in taxes. Ask the same question as it relates to government and you get the same result. Proposition 13 is nothing more or less than a disenchantment on the part of the people with their governmental institutions, with a feeling that they are getting more government than they care to pay for and they are paying more than they actually care to expend. As a consequence there is a reckless disregard for some of our institutions and a desire to strike out blindly in an effort to show this disenchantment, to show this discouragement, without even acknowledging the results of that blind striking. They cannot strike out and say "no" to the Federal government where most of them are feeling the heaviest of their frustration. In many instances they cannot strike out at the State government where there was

equal frustration, so they struck out in the form of Proposition 13. This same sort of thing has occurred in a number of other states. Some states have withstood the proposal, but there is a serious question as to whether or not they withstood the philosophy. The disenchantment, the discouragement is there and it's very deep. It does indeed affect every one of our governmental services. Unfortunately, in many instances it also affects the politician who is willing to prey on that disenchantment and to utilize it for political sustenance to advance a particular political career. In that form you will find politicians more and more spouting Proposition 13 comments and language and, in their legislatures and in the Congress, voting as though Proposition 13 were indeed the law of the land. There are other solutions to our problems in the area of taxes and overgovernment than the meat axe, but those of you who are involved in government must be aware that the meat axe is there. It is not something to laugh about; it is not something to ignore.

For those of you in higher education it represents a particular challenge. When you have this disenchantment on the part of the people they strike back at those areas which are literally or relatively unrepresented by noisy special interest groups in the legislative, congressional, or executive halls. One of the most unique things about higher education institutions is that they are essentially unrepresented. Colleges and universities have the greatest minds in a nation who spend their time trying to till the fertile soil of the youth and to raise future generations to do a better job in the field of business, government, social interaction. Yet they are essentially political units with no strong voice as to the course that government should take as it attempts to nurture those institutions of higher learning. If you look you will find that your support organizations speak out loudly if football or basketball or some of the other sports are endangered. They become mute and mum when the question comes as to whether or not a university's budget will be cut, as to whether or not the regents or the commissioner's salary recommendations will be approved, as to whether or not nuances or innovations in education will be responded to. For that reason, you stand in the greatest danger of all in this period of trial, tribulation, and in many instances, budget reductions. Although you survived the late '60s and early '70s, and we don't have the militancy that brought down the wrath of the legislators of that period, the residue is still there. The lack of support on the part of the average citizen is still there.

There are a number of people today who think a college education is a waste of time. There is a growing feeling, and I support part of it, of the importance of vocational education. It is absolutely amazing to me to hear individuals who have a college degree (who quite obviously are doing very well both because of their degree and also because of the system) speak about what a waste of time college is and how we ought to cut it back. You produced many graduates throughout this nation and yet they and their parents and their immediate relatives are still a minority insofar as having an articulate majority to work where a given goal is concerned. You have been involved in your universities (and I

realize you are worldly budget officers and not "heavenly academicians") but you've been involved in your universities, and in your ivy-covered palaces, contemplating your own activities and have not paid a great deal of attention to the rest of the world around you. The net result is that you do not have that kernel of support that you may badly need as you move into the late '70s and into the early '80s. Let me assure you that those that are succeeding in their goals of legislative largesse are groups that have vocal special interest groups and extremely squeaky wheels. Legislators will go home and declaim welfare, especially when they are speaking to the rich. But you will find that when they go back to the legislature they still vote the welfare programs, because articulate groups speak in their behalf and constitute special interest or pressure groups in the legislative halls. We ought to have just a few go periodically and we don't need all those brains and things of that nature. But these are not stupid people. These are people that actually are not supporting the very institutions that gave them, at least their financial life, and I think we hear an awful lot of that at the present time. We also hear a lot of negatives about what is taught in college and what is researched in college. This comes in part because, on occasion, colleges do teach and research some sort of stupid things. Part of our higher education has a little stupidity with all of the brilliance. Also, many times your academicians will not share with the people the importance of what is being researched.

In our capital city two years ago there was a series of editorials by a very responsible newspaper on some of the things that were being researched in our institutions of higher learning. They were extremely negative and one professor decided that he was not going to sit idly by and accept that without explaining why these things were done. It is rare indeed for higher education to have that type of support. That puts you in the front lines as a probable pawn as legislators go into the crunch of reducing taxes (or at least holding the line on taxes) and trying also to hold the line on expenditures.

The '80s represent an exciting period for higher education. It will be a time of declining enrollments for most; a time when new emphasis can be placed upon excellence for most. It also represents a time of challenge when you may be the plum that is plucked in order to feed somebody else's cornucopia of plenty. For that reason, though as I say you are the worldly budget officers, it would serve you well to talk to your academician friends, those who are clothed in the togas of the days of Greece and encourage them to wear modern suits of the twentieth century. Encourage them to get out of their ivory palaces and get down and talk to the people. Whether we like it or not, we are now moving into a time of relevancy when every public expenditure is going to be challenged and has to be defended. We are moving into a time where it is not sufficient to say this is what they do in California or in Oklahoma or in New York. We are going to have to show, whether we like it or not, that these expenditures are important. We are going to have to bring to bear every possible statistic to prove the appropriateness of our requests. Of equal importance we're going to have to



sell it beyond the legislative halls and beyond the governor's office. We have to sell it to all the people.

The major failing in the area of higher education, in my opinion, it is that far too little time has been spent in selling higher education to the people. You presuppose that when you graduate a young man or woman they will be so imbued with the alma mater that they will never forget it; that you can sound the ram's horn when the legislature meets and their battalions and brigades will swamp the legislature and force through your need for higher budgets. That is not true and they will ignore you. Once they have received the degree, though they will always remember their alma mater, far too many are not prepared to fight for improvements in higher education. You have not taken the time to sell them on the relevancy and the need for higher education. Too often in budget hearings I've heard everyone talk about the importance of research in higher education. Too often that research is not really relevant, not just to the governor, not just to the legislature, but to the taxpayers. The taxpayer has been ignored and that is one reason for Proposition 13 fever in many of our states. The answer lies in your hands and those of your fellow employees, graduates from your schools; people who are willing to go out and talk about it in terms that are easily understood by the individuals who pay the bills. Proposition 13 said very eloquently "we've had enough"; Proposition 13 said very eloquently "we want our priorities set"; Proposition 13 said very eloquently "we do not intend to continue to buy blindly everything that government says is good for us"!! The answer to Proposition 13 is for those in government and in higher education to disturb themselves from their academic halls and to go to the people. They must talk relevance and resource; talk importance and equate to dollars. They must share with them, as we move into days more complex than any of us can comprehend, the absolute necessity of an improved system of higher education. It cannot be provided free and without cost, but must be provided through the support of the taxpayers.

On frequent occasions, I have been asked by those in higher education, "How can we change this attitude of the people?" The answer is quite simple, change your own attitude about the people, acknowledge that they need and deserve to be sold, acknowledge that they as free citizens do not have to take government or any of its nuances or any of its institutions for granted. If you believe, as I'm confident that you do, and if your colleagues believe, as I am confident they do, that higher education is one of the answers to a better world, then you should share that attitude with the people who pay the bills. If you do you will not be the bottom rung of the priorities, you will be supported.

Publications of the Center for the Study of Higher Education  
College of Education  
University of Arizona

1. Monographs - \$3.00 each  
*Institutional Efficiency in State Systems of Public Higher Education*, by Fred Harclerod.  
*The Regional State Colleges and Universities in the Middle 1970's*, by Fred Harclerod, C. Theodore Molen, Jr., Suzanne Van Ort.  
*Changing Patterns of Governance in Higher Education*, by John Corson, Marvin Johnson, T. Harry McKinney, John Millett, Allan Ostar.  
*Council of Universities and Colleges: An Introductory History*, by Doris Meek, Don Morgan.  
*The Impact of Federal Policies on Higher Education Institutions*, by Louis W. Bender, G. Homer Durham, Warren G. Hill, Ralph K. Huitt, John D. Millett, Allan W. Ostar, Russell I. Thackrey.  
*The State Legislative Process and Higher Education*, by David Boren, John Folger, Jerome M. Hughes, G. Ben Lawrence, Donald R. McNeil.
2. Topical Papers - \$2.00 each  
No. 1 *Evaluating Higher Education*, by C. Robert Pace.  
No. 2 *Values and American Higher Education*, by Earl McGrath.  
No. 3 *Lifelong Learning: Higher Education's Response*, by Raymond Schultz.  
No. 4 *Public Policy and Higher Education*, by John Corson.  
No. 5 *Will There Be a Community College in the Year 2000?*, by Arthur Cohen.  
No. 6 *Are Church-Related Colleges Losing Students?*, by Earl McGrath, Richard Neese.  
No. 7 *Careers, Values and General Education*, by Earl McGrath.  
No. 8 *Higher Education Enrollments: Implications for the 1980's*, by Garland G. Parker.  
No. 9 *Institutional Assessment and Evaluation for Accreditation*, by Joseph J. Semrow.  
No. 10 *The Role of Public Student Aid in Financing Private Higher Education*, by Larry L. Leslie.  
No. 11 *Are Liberal Arts Colleges Professional Schools? A Restudy*, by George L. Lepchenske, Fred F. Harclerod.  
No. 12 *Tax Allowances for Nontraditional Students*, by Larry L. Leslie.  
No. 13 *The Private Costs of Postsecondary Education*, by Lowell J. Crary, Larry L. Leslie.  
No. 14 *The Setting of Tuition in Public Higher Education*, by James Rusk, Larry Leslie.  
No. 15 *Home Economics as an Academic Discipline: A Short History*, by Marie Negri Carver.

Publications may be obtained by writing to:

Director, Center for the Study of Higher Education  
University of Arizona  
1415 North Fremont Avenue  
Tucson, Arizona 85719